MALAYSIAN YOUTH FINANCIAL BEHAVIOUR: A STUDY IN KOTA DAMANSARA

AZLINAH BINTI MATRASHID

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By

AZLINAH BINTI MATRASHID

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SCHOOL OF ECONOMICS, FINANCE, AND BANKING
Universiti Utara Malaysia

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Tandatangan (Signature) :

DR. LOGASVATHI MURUGIAH
Pensyarah Kanan
Pusat Pengajian Ekonomi, Kewangan dan Perbankan
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ABSTRACT

Malaysia is a developed country with successful achievement in economy and social over the last five decades. However, there is a gap between the country performance, government efforts and its youth financial behaviours. Prior to this study, previous studies found that youth in Malaysia was reportedly had poor financial practices and behaviours. Hence, the objectives of this study are to investigate, examine, and identify the factors that influence financial behaviour among youth in Malaysia. Questionnaires were distributed to 400 respondents in Kota Damansara, Selangor, Malaysia in 2016. The respondents are ranging between the age of 15 to 40 years old. The finding of this study shows that age and income are two factors that significant with financial behaviours among youth in Malaysia, especially in Kota Damansara area. Youth within the age of 15 to 24 years old are found to be naive about financial education and financial knowledge, causing them to behave poorly financially. The finding also shows that youth with lower income has better financial behaviour compared to youth with higher income. Therefore, several strategies had been identified and suggested in this study to improve financial behaviours among youth especially within the age of 15 to 24 years old and earning high income. These strategies are hoped to improve financial behaviour among youth in Malaysia especially in Kota Damansara.

Keyword: financial behaviour, youth, age, income, Kota Damansara (Malaysia), regression

ABSTRAK

Malaysia adalah sebuah negara membangun dengan pencapaian yang membanggakan dalam sektor ekonomi dan sosial yang dinikmati sejak lima dekad yang lepas. Walau bagaimanapun, disebalik kejayaan dan usaha kerajaan dalam memajukan negara masih wujud kekurangan yang ketara dari aspek perlakuan kewangan dalam kalangan anak muda di Malaysia. Sebelum kajian ini dilakukan, terdapat kajian terdahulu yang melaporkan mengenai kelemahan yang ketara dalam perlakuan kewangan dalam kalangan anak muda di Malaysia. Oleh yang demikian, objektif kajian ini adalah untuk menyiasat, mengkaji, dan mengenal pasti faktor-faktor yang mempengaruhi perlakuan kewangan dalam kalangan anak muda di Malaysia. Kertas soal selidik diedarkan kepada 400 responden di Kota Damansara, Selangor, Malaysia pada 2016. Para responden terdiri daripada anak muda dalam lingkungan umur 15 hingga 40 tahun. Hasil kajian menunjukkan bahawa faktor umur dan pendapatan mempengaruhi perlakuan kewangan dalam kalangan anak muda di Kota Damansara, Malaysia. Kajian menunjukkan bahawa anak muda dalam lingkungan umur 15 hingga 24 tahun dikenal pasti sebagai kumpulan umur yang mempunyai pengetahuan yang cetek berkenaan pendidikan kewangan, sekaligus mempengaruhi perlakuan kewangan yang tidak baik. Kajian ini juga menunjukkan bahawa anak muda yang mempunyai pendapatan lebih rendah memiliki perlakuan kewangan yang lebih baik jika dibaningkan dengan anak muda yang mempunyai pendapatan lebih tinggi. Oleh yang demikian, beberapa strategi telah dikenal pasti dan dicadangkan dalam kajian ini yang bertujuan untuk meningkatkan ilmu pengetahuan dan pendidikan berkenaan kewangan dalam kalangan anak muda terutamanya bagi mereka yang berada dalam lingkungan usia 15 hingga 24 tahun. Strategi-strategi ini diharap akan dapat meningkatkan perlakuan kewangan dalam kalangan anak muda di Malaysia terutamanya di Kota Damansara.

Kata kunci: perlakuan kewangan, anak muda, umur, pendapatan, Kota Damansara (Malaysia), regresi

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Their contributions are sincerely appreciated and gratefully acknowledge. Above all, to the Great Almighty, the author of knowledge and wisdom, for his countless love.

DECLARATION

I hereby declare that this Research Paper is based on my original work except for quotations and citations that have been duly acknowledged. I also declare it has not been previously or concurrently submitted for any other master program at University Utara Malaysia or other institutions.

AZLINAH BINTI MATRASHID

Date: 27/3/2017

TABLE OF CONTENTS

		Page
Blank Page		
Title		
Certification of Thesis Work		
Permission to Use		i
Abstract		ii
Abstrak		iii
Acknowledgements		iv
Declaration		v
Table of Contents		vi
List of Tables		x
List of Figures		xi
List of Abbreviation/Notations/Glossary of Terms		xii
Text of Thesis (Chapters)		1-92
References		93
Appendixes		98
Blank Page		

Chapter 1: Introduction

1.0	Background of Study	1
1.1	Problem Statement	5
1.2	Research Questions	10
1.3	Research Objectives	11
1.4	Scope of the Study	11
1.5	Significance of the Study	12
1.5.1	Significance to the Body of Knowledge	12
1.5.2	Significance to Industry Player	12

1.5.3 Significance to Policy Maker 12
1.6 Definition of Key Terms 13
1.7 Organizations of the Thesis 14

Chapter 2: Literature Review

2.1 Financial Behaviours 16
2.2 Age 18
2.3 Income level 19
2.4 Marital Status 21
2.5 Gender 22
2.6 Financial literacy 24

Chapter 3: Methodology

3.0 Introduction 26
3.1 Theoretical Framework 27
3.2 Hypothesis Development 29
3.3 Research Design 31
3.4 Conceptual Definition and Operational Definition 31
3.5 Measurement of Variables / Instrumentation 37
3.6 Data Collection 41
3.7 Questionnaires Design 41
3.8 Sampling 44
3.9 Data Analysis 45
3.9.1 Diagnostic Test or Data Cleaning 45
3.9.1.1 Missing Data 45
3.9.1.2 Outliers 47
3.9.1.3 Reliability 48
3.9.2 Assumption Analysis 48

3.9.2.1 Normality 49
3.9.2.2 Linearity 49
3.9.2.3 Homoscedasticity 50
3.9.2.4 Multicollinearity 50
3.9.3 Descriptive Statistics 52
3.9.4 Correlation Analysis 53
3.9.5 Independent Sample T-Test 55
3.9.6 One Way ANOVA 56
3.9.7 Regression Analysis 57
3.10 An Econometric Model 59

Chapter 4: Results and Discussion

4.0 Introduction 61
4.1 Diagonal Tests 62
4.1.1 Missing Value 62
4.1.2 Outliers 63
4.1.3 Reliability Test 63
4.2 Assumption analysis 64
4.2.1 Normality 64
4.2.2 Linearity 66
4.2.3 Multicollinearity 67
4.2.4 Homoscedasticity 69
4.2.5 Autocorrelations 70
4.3 Descriptive Analysis 71
4.4 Correlation Analysis 75
4.5 Regression Analysis 77
4.5.1 Model Summary 77
4.5.2 ANOVA 78

4.5.3 Coefficients Analysis 78
4.6 Conclusion 85

Chapter 5: Conclusion and Recommendations

5.0 Introduction 86
5.1 Objective One 86
5.2 Objective Two 88
5.3 Limitation of the Study 89
5.4 Contribution of the Study 90
5.4.1 Contribution to the Body of Knowledge 90
5.4.2 Contribution to Industry Player 91
5.4.3 Contribution to Policy Makers 91
5.5 Recommendations for Future Study 92

References 93

Appendixes

APPENDIX A: Questionnaire 98

LIST OF TABLES

	Page
Table 3.1: Rule of Thumb on the Correlation Coefficient Scale	54
Table 4.1: Detection of Missing Value	62
Table 4.2: Result of the Reliability Test in Cronbach's Alpha	63
Table 4.3: Skewness and Kurtosis Values for Financial Behaviour, Financial Literacy, Age, Gender, Income, and Marital Status	65
Table 4.4: Test of Multicollinearity using Variance Inflation Factor (VIF)	67
Table 4.5: Correlations Matrix between Financial Literacy, Age, Income, Marital Status, and Gender	68
Table 4.6: Durbin-Watson Test of Autocorrelation	71
Table 4.7: Descriptive Statistics for Financial Behaviour, Age, Gender, Income, Marital Status, and Financial Literacy	71
Table 4.8: Frequency Distribution for Age, Gender, Income, Marital Status, and Total Score of Financial Literacy	72
Table 4.9: Correlation Matrix between Dependent Variable and Independent Variables	76
Table 4.10: Model Summary	77
Table 4.11: ANOVA	78
Table 4.12: Coefficients	79
Table 4.13: one-way ANOVA test	80
Table 4.14: Mean and Standard Deviation for Age Group	80
Table 4.15: Tukey Post Hoc Test for Financial Behaviour and Age Group	81
Table 4.16: Proportion of monthly payment for loans and other debts based on income level	82
Table 4.17: Testing for Hypothesis	83

LIST OF FIGURES

	Page
Figure 1.1: Malaysia GDP Growth (1960 – 2015)	2
Figure 1.2: Population in Malaysia (1960 – 2016)	3
Figure 1.3: Population in Malaysia Based on Age Group (2016)	3
Figure 1.4: Major Reasons for Bankruptcy in Malaysia	6
Figure 1.5: Bankruptcy Cases in Malaysia from 2010 to 2015 Based on Age Group.	7
Figure 1.6: Purpose of Loans among Youth in Malaysia.	8
Figure 3.1: Theoretical Framework	27
Figure 4.1: Histogram of Normal Distribution Curve for Financial Behaviour	65
Figure 4.2: Normal P-P Plot of Regression Standardized Residual for Financial Behaviour	66
Figure 4.3: Scatterplot of Financial Behaviour	70

LIST OF ABBREVIATION/NOTATIONS/GLOSSARY OF TERMS

Abbreviation	Explanation
AKPK	Agensi Kaunseling dan Pengurusan Kredit (Credit Counseling and Debt Management Agency)
ANOVA	Analysis of Variance
BNM	Bank Negara Malaysia
FOMCA	Federation of Malaysian Consumers Association
GDP	Gross Domestic Product
MDI	Malaysia Department of Insolvency
MOE	Ministry of Education
RM	Ringgit Malaysia
SPSS	Statistical Package for the Social Science
VIF	Variance Inflation Factors

CHAPTER ONE
INTRODUCTION

1.0 Background of Study

Since gained independence from the British Colonial in 1957, Malaysia emerge as an upper-middle income economy that has been successfully experiencing rapid development and economic growth over the past five decades. Hence, Malaysia is considered as a developing country that is on the brink of becoming a fully developed country by year 2020.

The success is often referred to its overall achievement in economic, social and financial sector. The World Bank has identified Malaysia as one of 13 countries in the world have recorded average growth of more than 7% per year for 25 years and more (The World Bank, 2016). Malaysia Gross Domestic Product (GDP) has increased tremendously from only USD1.916 billion in 1960 to USD296.218 billion in 2015 (The World Bank, 2016). The fact that Malaysia has diversified its sources of income over the past five decades helped the country to maintain its economic growth and development. History showed how Malaysia manage to survive the tough time during the 1997/1998 Asian financial crisis and still able to score average 5.5% growth per year from year 2000 to 2008. After hit by the Global Financial Crisis in 2008, Malaysia recovered rapidly by posting average growth rate of 5.7% since 2010 (The World Bank, 2016).

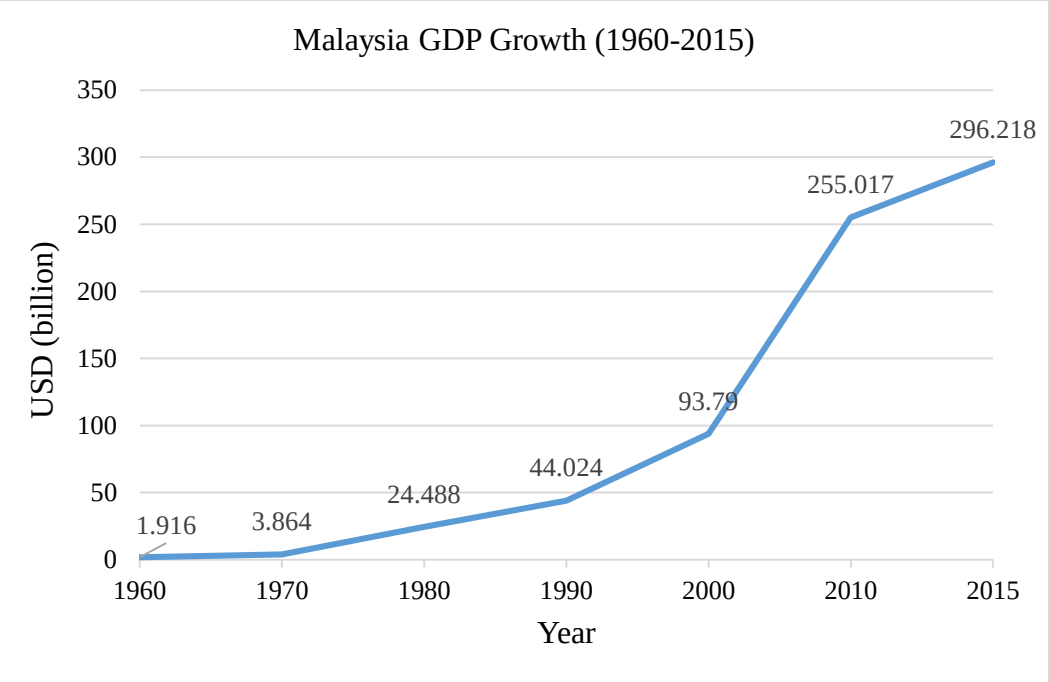

Figure 1.1:
Malaysia GDP Growth (1960 – 2015)
Source: The World Bank, 2016

Malaysia's population also has been increasing from only 8.1 million people in 1960 to over 31.6 million people in 2016 (Department of Statistics Malaysia, 2016). Interestingly, almost 11.5 million people (36.27%) of the total population are youth age range between 20 to 39 years old (Department of Statistics Malaysia, 2016). Increase in population is a good sign for the economy as it provides human capital to develop the country. Statistics also indicates that labour force in Malaysia has increase almost 34% from only 9.7 million people in 2001 to more than 14.7 million people in second quarter of 2016 with the stable unemployment rate at an average of 3.3% (Department of Statistics Malaysia, 2016).

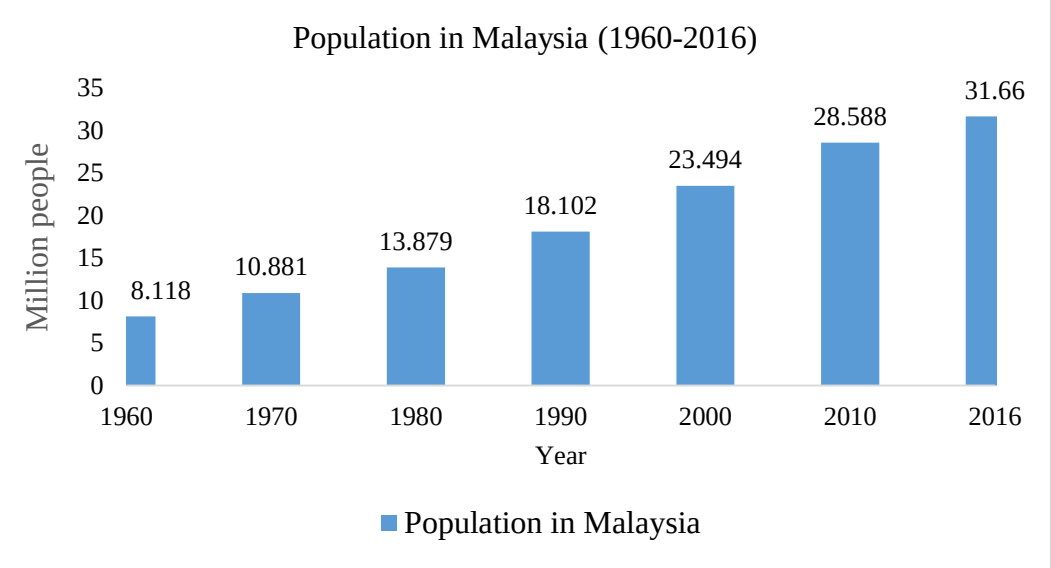

Figure 1.2:

Population in Malaysia (1960 – 2016)

Source: Department of Statistics Malaysia, 2016 and Malaysia Population & Housing Census, 2010

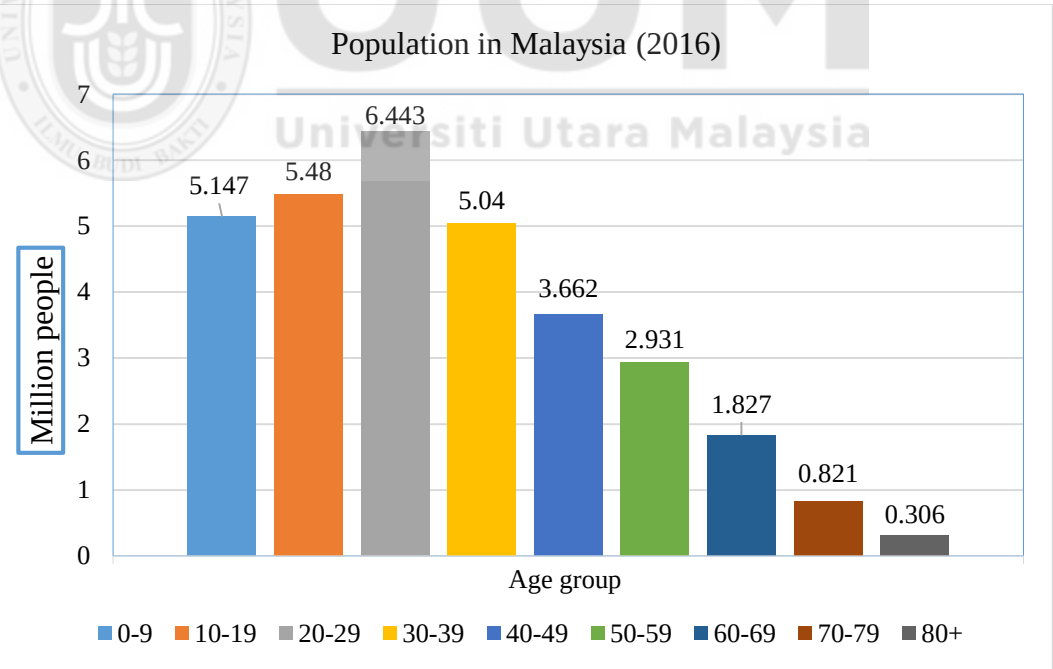

Figure 1.3:

Population in Malaysia Based on Age Group (2016)

Source: Department of Statistics Malaysia, 2016

Furthermore, Malaysia is also successful in social development. One of the main indicator to determine social development is through eradication of poverty. According to The World Bank report (2016), Malaysia has succeeded in nearly eradicate the poverty among Malaysian as the share of households living below the national poverty line has been plunging down from 50 percent in the 1960s to only 1% in 2015. It is believed that education plays very important role in poverty eradication. Due to the importance of education especially among children and youth, government has been continuously focusing on improving education system as well as providing assistance to ensure no children left behind, especially in rural area. According to an observation by The World Bank, from the period of 2000 until 2010, more youth in Malaysia enroll in tertiary level educations. This is because most of Malaysian youth perceive that they will get better chance to get jobs with well-paying salary with a bachelor's degree, certificate or diploma compare to secondary school qualification (Survey of Malaysian Youth Opinion, 2012). The survey also found that youth in Malaysia are very well adapted to the importance of information technology. The survey indicates huge drop in the percentage of youth who do not at all access the internet for information seeking from 67% in 2007 to only 2% in 2012 (Survey of Malaysian Youth Opinion, 2012).

With all the success and achievement in both social and economy, yet still there is a gap between the country performance, government efforts and its youth financial behaviours. Though the economic growth is stable and unemployment rate stay low at an average of 3.3%, Malaysian youth still find it difficult to

survive the rising cost of living and higher inflation in highly urbanized states such as Kuala Lumpur, Selangor, Johor and Penang with relatively lower income (Bank Negara Malaysia Annual Report, 2015). The combination of lower income, rising cost of living and higher inflation especially in urban area are the top challenges that contribute to the next problem facing Malaysian youth which is debts lead to bankruptcy. Some are blaming youth for their poor financial knowledge, financial management and spending behavior that trapped them into debts. However, on the other side due to current situations such as lower income, rising cost of living, high inflation, and decrease in purchasing power, young people in Malaysia are forced to commit into debts.

Deregulation added with availability of credit facilities being offered by banks and credit institutions proving to be challenging to Malaysian youth. Without proper knowledge on these products combine with improper financial management and lack of control in financial behaviors, it is a perfect recipe for financial pitfall among Malaysian youth. Over the years, financial problems such as over indebtedness has been identified as one of major causes of bankruptcy, mental illness, divorce, unemployment, and other social problems (Wolcott & Hughes, 1999). Therefore, this study is design to uncover this issue.

1.1 Problem Statement

Over the years, youth has been the center of attention for all the wrong reasons. Numerous statistics, reports and surveys by Bank Negara Malaysia, Malaysia

Department of Insolvency (MDI), Credit Counseling and Debt Management Agency (AKPK), Federation of Malaysian Consumers Association (FOMCA) as well as newspaper reports show that Malaysian youth have been facing a lot of financial problems (especially indebtedness) as a result of their improper financial decisions and financial behaviors.

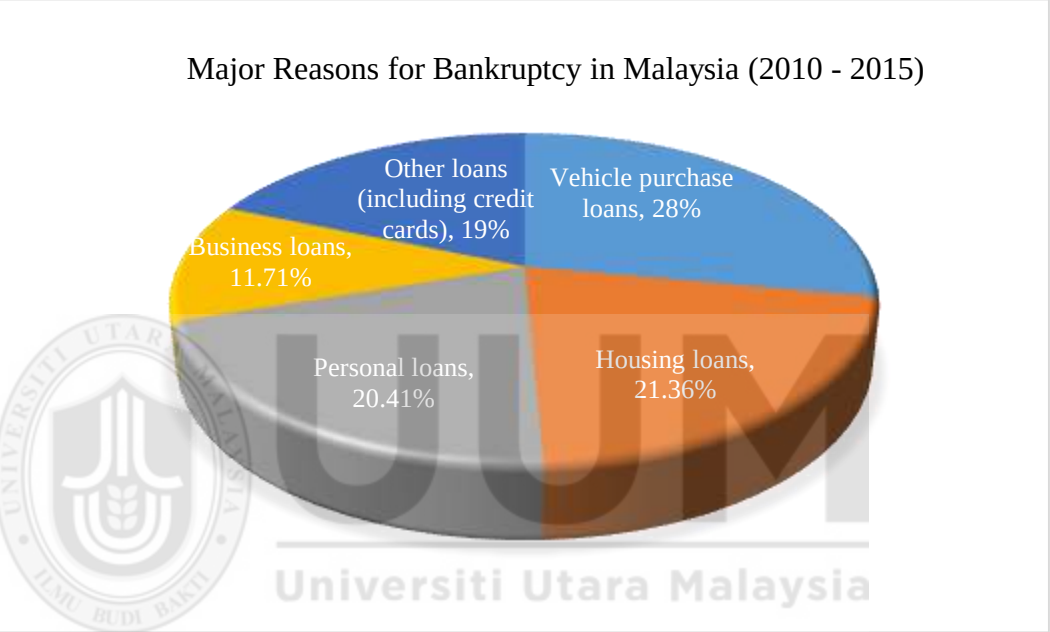

Figure 1.4:
Major Reasons for Bankruptcy in Malaysia
Source: Malaysia Department of Insolvency, 2016

Malaysia Department of Insolvency (MDI) reported that approximately 107,000 bankruptcy filing have been recorded since 2010 until April 2015. Sadly, almost 60% of the total numbers are contributed by youth from age below 25 years to 34 years old (Berita Harian, June 2016). Major reasons of bankruptcy cases are due to outstanding payment in vehicle purchase loans (27.94%), arrears in housing loans (21.36%), fail to pay personal loans (20.41%), default payment in business

loans (11.71%) and mismanage of credit cards debt by 5%, other loans 13.58% (Malaysia Department of Insolvency, 2016).

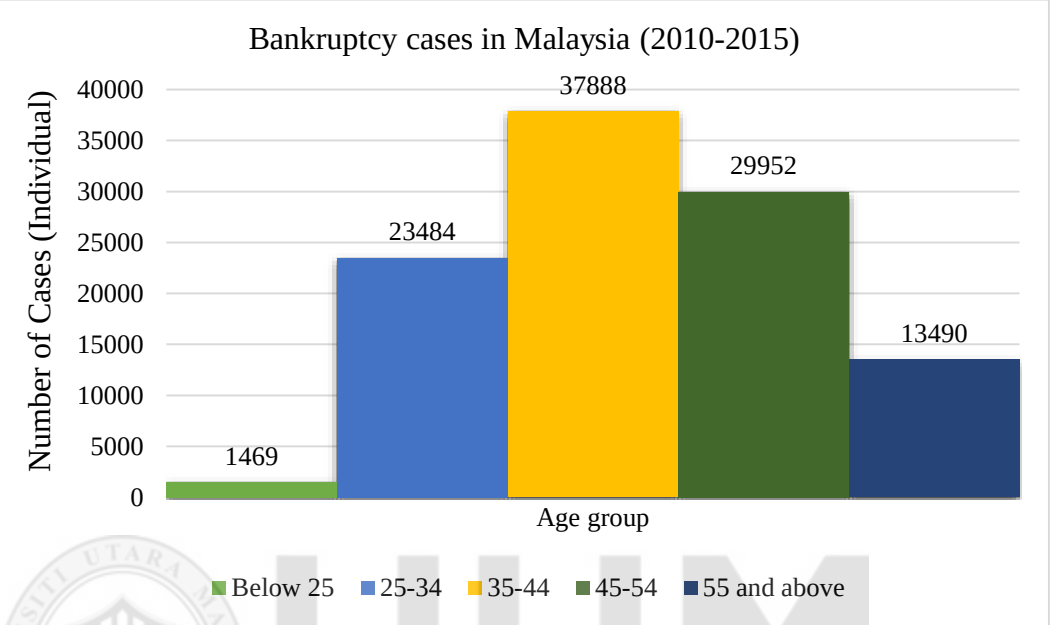

Figure1.5:
Bankruptcy Cases in Malaysia from 2010 to 2015 Based on Age Group.
Source: Malaysia Department of Insolvency, 2016

Another survey among youth age between 18 to 35 years old conducted by Federation of Malaysian Consumers Association (FOMCA) in 2012 found that 37% of young Malaysian were living beyond their means while 47% used more than 30% of their monthly income to pay off debts. The survey also indicates that 43% of respondents have low level of financial knowledge and 37% never think of their retirement planning (Ringgit, November 2012). From the results of all the statistical analysis, survey and report mentioned, it gives perception that Malaysian youth still have poor financial practices and behaviour causing them to be burden with debts.

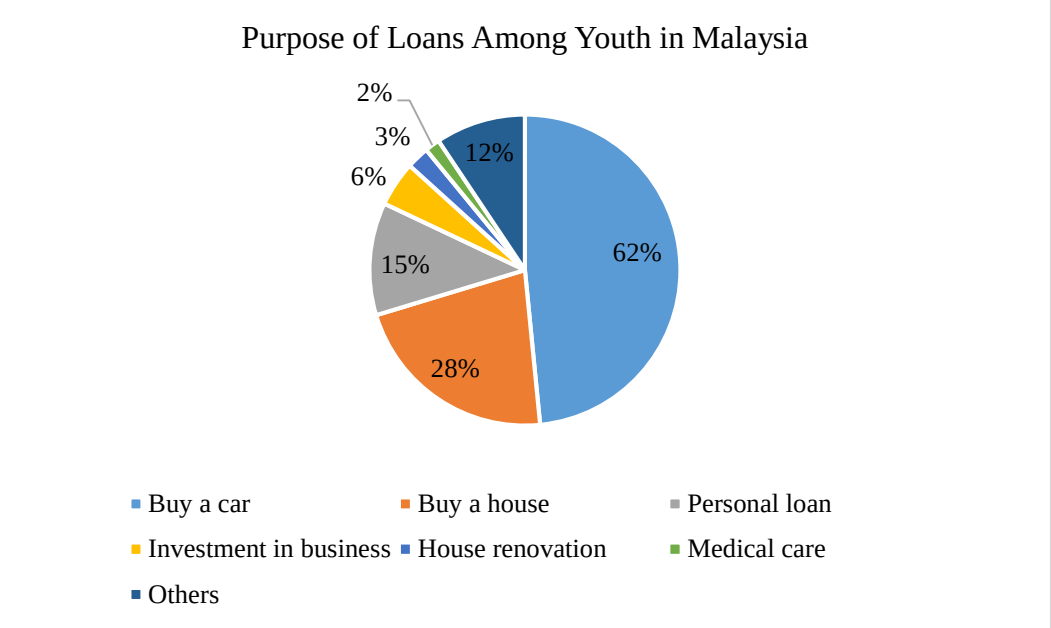

Figure 1.6:
Purpose of Loans Among Youth in Malaysia.
Source: Survey of Malaysian Youth Opinion, 2012

Previous studies regarding financial behaviours in Malaysia and other countries investigate the relationship between financial behaviours and credit cards usage as the cause of indebtedness (Maswati *et. al*, 2015; Arabzadeh, & Aghaeian, 2015; Omar, *et. al*, 2014; Alam, *et. al*, 2014; Ming-Yen Teoh, *et. al*, 2013; Xiao, *et. al*, 2011; Ahmed, *et. al*, 2010; Ramayah, *et. al*, 2002). However, evident from Malaysia Department of Insolvency shows that credit card debts only contribute small percentage to the bankruptcy statistics (Survey of Malaysian Youth Opinion, 2012). Most of Malaysian youth facing problem with debts accumulated for other purposes such as to purchase vehicle, house and loan for personal use rather than credit cards.

Studies also found several factors influencing financial behaviours including income. Some studies agree that high income encourage people to have more

debts (Kempson *et. al*, 2004; Del-Rio & Young, 2005; Ming-Yen Teoh *et. al*, 2013; Cassells *et. al*, 2015; Coskuner, 2016), while others disagree with that statement by revealing that people with lower income more reliant to debts and have debt problems (Legge & Heynes, 2009; Dearden *et. al*, 2010; Embong, 2014).

Other studies found the importance of age in determining financial behaviours with most researchers found younger people to have higher risk of getting into debts and lower savings (Kempson *et. al*, 2004; Tudela & Young, 2004; Legge & Heynes, 2009; Chudzian *et. al*, 2015; Jureviciene et.al, 2016), however several findings did found that older people also have more debts and big spender (Survey of Malaysian Youth Opinion, 2012; Ming-Yen Teoh *et. al*, 2013).

Other than that, marital status and gender also believed to have influenced financial behaviours with most researchers agree that married people are more reliant to debts and have less savings compared to single people (Kempson, 2002; Kempson *et. al*, 2004; Legge & Heynes, 2009; Ming-Yen Teoh *et. al*, 2013; Cassells *et. al*, 2015). However, other studies found that married people are in fact more responsible in fulfilling financial liabilities and more motivated in savings (Chudzian *et. al*, 2015; Jureviciene *et. al*, 2015). Furthermore, gender differences also do determine financial behaviours with most research agree that female or women have poorer financial behaviours compared to male or men (Fisher, 2010; Richa, 2012; Hussin et. al, 2013; Chudzian et. al, 2015; Achtziger et. al, 2015), while others disagree by proving that men are also have poorer financial

behaviour than women (Falahati & Paim, 2011; Jurkovico, 2016; Jureviciene, 2016).

Other researchers also focus their attention on the importance of financial literacy in determining financial behaviours (Ahmad, *et.al,* 2010; Hill and Perdue, 2008; Lusardi, 2009; Perry and Morris, 2005). Earlier research found that low level of financial literacy as the main reason for their improper financial decision and financial behavior (Ahmad, *et. al*, 2010; Lusardi & Mitchell, 2010; Logasvathi, 2013; 2014; Selvanathan *et. al*, 2016), low involvement in practicing personal financial planning (Boon *et. al*, 2011) and affecting investors' investment decisions (Awais *et. al,* 2016), and improve financial satisfaction (Coskuner, 2016). However, several recent studies argue and reveal that financial knowledge, financial education and financial literacy does not influence financial behaviour (Herdijono *et. al,* 2016; Kaiser and Menkhoff, 2016).

Due to minimum level of studies done in Malaysia that focus on factors that influence financial behaviours among youth, hence it is important to conduct this study to investigate the factors that influence financial behaviours among youth in Malaysia and their current financial practices.

1.2 Research Questions

This study aims to find the answers for the following questions;

1. How does demographic factors influence financial behaviours among youth in Malaysia?

2. Which is the factor (s) that influence financial behaviours, among youth in Malaysia?

1.3 Research Objectives

The objectives of this study are to investigate the following;

1. To investigate the relationship between demographic factors and financial behaviours among youth in Malaysia.

2. To identify the factor (s) that influence financial behaviours, among youth in Malaysia.

1.4 Scope of the Study

The study will use a sample size of 400 respondents, with age ranging between 15 to 40 years old. This age range is following the definition of youth according to National Youth Development Policy, 1997. Questionnaires will be distributed to collect the data from the respondents. The sample selection for this study consist of working youths and students of college or university, and offices in Kota Damansara area. The reason for this sample selection is because youth at this age range mostly consist of both category; students and working youth. By having both in the sample, the results are hope to be more informative and reliable due to the fact that both students and working youth have different priority in their

current life stage, hence they might have different financial practices and behaviours.

1.5 Significance of the Study

1.5.1 Significance to the Body of Knowledge

The finding of this study is hoped to add more information and knowledge to the existing literature on financial behaviour especially among youth. The study also targeting to tackle the factors that influence bad financial decision, practices and behaviour that currently exist in past studies. The finding of this study ~~is~~ believed to fill in the gap especially financial behavior study in the body of knowledge.

1.5.2 Significance to Industry Player

This study also provides idea, strategies and shed some light to the industry players to help educate youth to understand the complexity of financial products and services that currently exist in the market. It is also hope to provide useful information to existing agencies such as Credit Counseling and Debt Management Agency (AKPK), Bank Negara Malaysia (BNM) and other agencies that provide educational, training and management program related to financial knowledge and practices. The finding from this study can be used to design and improve the contents of their program in order to increase awareness and knowledge about good financial practices among youth.

1.5.3 Significance to Policy Maker

The results of this study also provide useful and meaningful data to be use by the ministry of education (MOE) and other policy maker in order to draft a suitable and tailor made curricular syllabus for kids in primary school, youth in secondary school and young adults in college and university level to expose them into learning about the importance of financial knowledge and good financial practices that can be used in their later life once they start working.

This study offers practical information to government and policy makers to developed policies that can help the development of financial knowledge and financial behaviour among youth in Malaysia. Government could also set up agency or department under Bank Negara Malaysia that focus on providing education and training program which is not only could help to improve financial literacy among Malaysian, but also helps to improvise their financial practices and behavior. In directly, financial health among youth in Malaysia are taken care.

1.6 Definition of Key Terms

The following definition were referred to specifically for this study's purpose.

Financial behaviour is defined as lifestyle that related with financial behaviours which is measured by individual behaviours and decisions that related to financial matters and financial decisions (Ahmad *et. al*, 2010).

Age is defined as the period someone has been alive (Cambridge dictionary)

Income is defined as the maximum amount that an individual can consume without reducing its real net worth, also known as compensation of employees

comprises wages, salaries and other benefits, in cash or any kind (Malaysia Department of Statistics, 2014).

Marital status is defined as the condition of being married or unmarried (Malaysia Population & Housing Census, 2010),

Gender is referred to social or cultural distinctions associated with being male or female (Diamond, 2002)

Financial literacy is defined as basic understanding and knowledge about financial topics (Hill & Perdue, 2008)

Youth is defined as individual in Malaysia with age between 15 to 40 years old (National Youth Development Policy, 1997)

1.7 Organizations of the Thesis

Chapter 1: The first chapter introduce the topic of interest as well as the problem that need to be solve in this study. The significance of the study is provided so that readers know the purpose of conducting this study. The objectives of the study serve as a guide for the whole study.

Chapter 2: This chapter is dedicated to review past literatures related to this study which serve as the foundation of this study.

Chapter 3: This chapter illustrates the methodology used in this study. It discusses the development of the framework, hypothesis, research design, operational definition, measurement of variables, data collection procedure and design, sampling and data analysis procedures in details.

Chapter 4: This chapter presents the results of the statistical analysis for the data collected as well as the important findings from data analysis.

Chapter 5: Finally, this chapter provides the discussions and conclusion for the objectives of this study. The contribution of current study is also discussed as well as limitations of the current study and recommendations for future study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Financial Behaviours

Behaviors also known as lifestyle is defined as a way of life. Kahle, *et. al* (2011) defines how an individual, group or culture denote their interests, opinions, behaviors, and behavioral orientations into their life. Lifestyle that related with financial behaviours measured by individual behaviours and decisions that related to financial matters such as savings, consumption and spending patterns, retirement planning, debt acquisition and repayments, financial budgeting and other related financial decisions (Ahmad *et. al*, 2010).

Research related to financial behaviors had been conducted for many years. In the recent years, several studies on savings behaviour have been conducted in order to understand factors that influence savings. In Georgia, the people are known for its collectivistic value and high tendency of high social level. Therefore, most of Georgian love to spend rather than savings, and the attitude towards savings is different between young and old people (Chudzian *et. al* (2015). In another study in United Kingdom, researcher identified that indebtedness is common among people with lower income (Dearden *et. al*, 2010).

On the other hand, Australian economic condition does influence that changing savings behaviour among its people. According to Cassells *et. al* (2015), decline in savings among household prior to the global financial crisis is mainly due to

the increased availability of credit, falling real interest rates, more stable economic outcomes, rising house prices, rising household income and higher income expectations. All this factors influence the household behaviour resulting higher consumption (Finlay & Price, 2014). However, after the global financial crisis, households' attitudes towards debts and savings changed, where Finlay and Price (2014) found that households with higher levels of education downgraded their future income prospects and increased their savings.

Furthermore, earlier studies also focus their attention on factors that influence indebtedness and over indebtedness. A study in New Zealand that examine the indebtedness of New Zealand families found demographic factors influence the level of debts. The study also indicates that deregulation and product development and innovation has made access to debt widely available, thus encouraging people to acquire credit facility (Legge & Heynes, 2009).

Several studies examine the relationship between spending behaviours and indebtedness. Study by Ahmed *et. al* (2010) indicated that spending behaviours often related to over usage of credit cards in attempt to living a high-class lifestyle that lead to indebtedness. Others found compulsive buying as the reason of indebtedness (Achtziger *et. al*, 2015 & Omar *et. al*, 2014). Research also shows that people often trapped into debt problem due to their over spending and living life beyond means (Anderloni & Vandone, 2011). Hamilton (2002) highlighted that materialism as another reason of indebtedness. It is because materialism involving spending money to acquire material things, therefore the relationship between materialism and debts is unavoidable.

Other studies also find the relationship between financial literacy and financial behaviour. Financial literacy defines as a basic understanding of investing, insurance, credit management and other topics that related to personal finance. In another word, financial literacy is financial knowledge (Hill & Perdue, 2008). Study by Ahmed *et. al* (2010) shows that improper financial decisions and behaviours are a result of low financial literacy. Over the last decade, studies have been linking knowledge and investment decisions and behaviours (Morrin *et. al*, 2008; Awais *et. al*, 2016), financial literacy and financial behaviour of college students (Shaari *et. al*, 2013), financial literacy among Malaysian (Logasvathi, 2014), and financial literacy and personal financial planning (Boon *et. al*, 2011).

2.2 Age

Previous researches have mixed results regarding the relationship between age and financial behaviour. Legge and Heynes (2009) found that life-cycle relationship exists between age and total debt among New Zealander. They found strong link between age and debts indicating that young people have the highest risk of having debts problem due to better access in credit facilities and more liberal attitudes towards credit usage. The study concluded that younger people are more reliant to debt in their 20s, then though in their 30s until late 40s, ultimately falls from 50s until retirement. Similarly, a study on savings behaviour among Georgian also support the effect of life-cycle theory. The study by Chudzian *et. al* (2015) found that savings is determined by age structure. Younger

people have lower savings in their early 20s due to lower income and starting families, then started building savings as they become older due to increase in their income. Another earlier study in United Kingdom also found that youth in 20s and 30s are more likely to have debt problem than older people (Tudela & Young, 2003; 2004) and have higher probability of participation in unsecured debts compare to older people (Del-Rio & Young, 2005). Kempson (2002) and Kempson *et. al* (2004) denoted that most of youth are starting to have their own family, having children and setting up new homes in their 20s, thus increasing their expenses and expenditure. This is also supported by recent study in Lithuania which revealed that credit demand is much higher among younger people compared to older people (Jureviciene, *et. al*, 2016).

However, a study among youth in Malaysia found opposite finding. The study found that total loan increases as youth getting older (Survey of Malaysian Youth Opinion, 2012). The study concluded that the total of debt or loan among youth age 30-35 years old is higher compare to age group 25-29 years old and age group 20-24 years old. Another recent study on spending behaviour among credit card holders in Malaysia also found similar result. The study found that older people spend more on credit cards compared to younger people (Ming-Yen Teoh *et. al*, 2013). Due to the difference in previous finding, it is important to investigate the relationship between age and financial behaviour among youth in Malaysia.

2.3 Income level

Another important variable in determining financial behaviour is income level. Interestingly, most of previous research found positive relationship between income level and the debts among households. Research in United Kingdom found that families with higher income have more arrears in debts compare to lower income earner (Kempson, *et. al*, 2004). Meanwhile, Del-Rio & Young (2005) reported that there is positive expectation of individual's future financial position and the probability of participation in the unsecured debt market. They found that debt holders that possess higher income have larger amount of unsecured debt, thus enable them to acquire more debt. In other words, higher the income level, higher the risk that they are willing to accept due to high risk high return theory. Similarly, study among Australian also found that, as income rises, so does the total debt. The reason is because people with higher income have ability and capacity to pay off their debt (Cassells *et. al*, 2015). This finding is also supported by the recent study which found that income is the most influential factor predicting financial satisfaction among individuals in Turkey. Individuals with higher income have positive financial behaviours such as paying credit card bills in full, save money and budgeting as well as planning for retirement, as a result of income capacity (Coşkuner, 2016). Ming-Yen Teoh *et. al* (2013) on the other hand found that credit cards owner with higher income in Malaysia are more likely to spend more compare to credit cards owner with lower income who are more careful in their spending. However, a recent study in Kota Damansara, Malaysia found that income does not influence credit card debts (Selvanathan, *et. al,* 2016).

Other than that, several other researchers also found the opposite results. In examining the indebtedness in New Zealand, research found that families with lower income allocate more of their income to pay off debts. This is because traditionally young people start having partner or family at the start of their working life when their income is low, thus contribute to high ratio of borrowing in order to support the high cost of living (Legge & Heynes, 2009). This finding is supported by Dearden *et. al* (2010) that lower income earner has more problem with debts and debts repayment compare to those earning higher income in United Kingdom. Similarly, another recent study in Malaysia found that most of lower-middle class (people who earn RM2,500 to RM7,500) Malaysian are facing difficulty to maintain their lifestyle due to economic condition and rising cost of living in Malaysia. Slow increase in income is one of the reason why most of middle class households have to take up loans from banks to finance house, car, children education and to cover other expenses (Embong, 2014).

2.4 Marital Status

Research also found the relationship between marital status and financial behaviour. Most study found positive relationship between marital status and financial behaviour. Earlier study by Kempson (2002) in United Kingdom found that credit usage among married couple with children are higher compare to single person. In another word, credit is used the most when people set up home and when they have children. It is also evident that larger families are more likely to have arrears especially when the income is low (Kempson *et. al,* 2004). Based on

a study by Legge and Heynes (2009), due to the high cost of living in New Zealand, the proportion of debts among couple families are higher compare to single people especially when they have children. The same result found in Malaysia. Due to higher expenditure and responsibility towards family, most of credit card owner who are married spend more on their credit cards compare to single owner (Ming-Yen Teoh *et. al*, 2013). Additionally, Cassells *et. al*, (2015) highlighted that couple households have significantly higher amount of debts than a single adult household in Australia. The relationship between marital status and financial behaviour in term of saving is also similar. Study found that married people with children is more motivated to savings compare to those without child and single people (Chudzian *et. al*, 2015). However, a recent study in Lithuania revealed that even with high commitment and increase expenditure among married people, surprisingly they are more responsible fulfilling liabilities on time compared to single and divorces people (Jureviciene *et. al*, 2016)

2.5 Gender

Gender differences do play important role in determining financial behaviours. A study that explore the differences in savings behaviours between single women and single men in America found that due to lower risk tolerance among women, they are less likely to have savings compare to men (Fisher, 2010). Similarly, Chudzian *et. al* (2015) study in Georgia also found that men in Georgia have more positive attitudes towards savings compare to women. The reason behind that result is because in Georgian masculinist culture, men are more exposed to

social assessment than women; often responsible for the financial security and provide for the family.

The gender differences always become the focus point when it comes to spending pattern and buying behaviours. Several studies found strong link between female and spending patterns and buying behaviours. A study on spending behaviour among consumer in India found that due to more disposable income and rising purchasing power among women in India, the emphasis is more to spending than savings. Additionally, the availability of credit facility such as credit cards and emerging of online shopping encourage Indian women to engage more in online shopping (Richa, 2012). Moreover, Hussin *et. al* (2013) expressed that among credit cards users in Malaysia, women are less discipline when spending using credit cards. He noted that, women tend to do unplanned purchases whenever carrying credit cards while shopping. A recent study in Germany do find the link between self-control, compulsive buying and indebtedness, and how it influencing spending behaviours among women. The study found that women that have low self-control skills are more prone to compulsive buying, resulting in higher level of debt (Achtziger *et. al*, 2015).

However, several studies found opposite results that shows good financial behaviour among women. A study after the Great Recession in United States found that single women are more tolerance towards borrowing to meet living expenses while at the same time more cautious about borrowing for non-essentials (Routzhan & Hansen, 2014). In separate study that focus on college students in Malaysia, the study found that although female students possess lower level of

financial knowledge and started practicing financial socialization later than male, they somehow have higher level of financial satisfaction than male students (Falahati & Paim, 2011). Moreover, a study in Slovakia found that women are more risk averse than men when it comes to insurance purchase which encourage women to continue purchasing insurance protection plan. Men on the other hand sees insurance purchase as an investment opportunity. They tend to cancel it if no insured event occurred as they consider insurance as an unnecessary and unprofitable investment (Jurkovicova, 2016). Furthermore, a study on factors affecting personal solvency and consumer credits in Luthiania revealed that men are more likely to undertake consumer credits than women while the number of debtors is also higher among men (Jureviciene *et. al,* 2016).

2.6 Financial literacy

The importance of financial literacy in shaping individual's financial behaviour has been the focus of study by many previous research. Financial literacy is also known as financial knowledge. It is a basic understanding of financial topics such as investing, insurance, credit management and other personal finance topics (Hill & Perdue, 2008). Earlier studies indicate that lack of financial literacy believed to be the reason of improper financial decision and behaviour (Ahmad *et. al*, 2010). A study shows that low level of financial literacy is the reason for low involvement of Malaysian in practicing personal financial planning (Boon *et. al*, 2011). The study indicates that though Malaysian are aware of the importance of personal financial planning, many still lacking in understanding the significance

of personal financial planning and benefits that may derived from it (Logasvathi, 2014). Financial literacy is also important in determining the risk tolerance among investors to make the best investment decision. Knowledgeable investors able to analyze information efficiently and improve the capacity to jump into risky investments to earn higher returns by efficient investment management (Awais *et.al,* 2016). Other study also found that people who are less educated possess lower financial literacy, thus causing them to have less understanding in advance financial practices (Ahmad *et. al*, 2010). The problem with lower level of financial literacy does not only happen in Malaysia but also in developed countries such as United States, United Kingdom, Japan, and Australia (Lusardi & Mitchell, 2010). Study shows that in United States, most youth are not equipped with financial knowledge (Lusardi & Mitchell, 2010). Higher level of financial knowledge has been identified contributing to the financial satisfaction among people in Turkey. The study found that individuals who are financially knowledgeable are more likely having positive financial behaviours and improved financial satisfaction (Coşkuner, S. (2016). A study in Kota Damansara, Malaysia also found that people with higher financial knowledge is less likely to have credit card debts (Selvanathan *et. al,* 2016). On the other hand, a study in Merauke, Indonesia revealing that level of financial knowledge does not influence financial management behaviour (Herdjiono et. al, 2016). This finding supported by Kaiser and Menkhoff that concluded financial education in low and lower-income countries are less effective and does not have much influence on financial behaviours (Kaiser and Menkhoff, 2016).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This study focus on financial behaviours among youth in Malaysia and the factors that influencing it. Financial behaviour is the dependent variable, in which the change in the variation is attempted to be explained by five independent variables; age, income level, marital status, gender, and financial literacy.

All variables are chosen and measured based on the previous studies in financial behaviours topic. There are also 5 hypotheses developed based on finding from the previous studies.

The data in this study collected using questionnaires distribution in Kota Damansara area in Selangor, Malaysia. There are 400 questionnaires collected from the respondents which consist of youth within the age of 15 to 40 years old.

The data collected is analyze using SPSS Statistics Version 24. Firstly, diagnostic tests are conducted for data cleaning purpose to check for any missing data, outliers, and reliability. Furthermore, assumptions analysis is conducted to ensure the data meet the assumption for normality, linearity, homoscedasticity, multicollinearity and autocorrelations. Once the data meet the assumptions, further analysis are conducted which involving descriptive analysis, correlation analysis, t-statistics, one-way ANOVA, and regression analysis.

3.1 Theoretical Framework

The dependent variable in this study is financial behaviour, in which the change in the variation is attempted to be explained by five independent variables; age, income, marital status, gender, and financial literacy as shown in Figure 3.1.

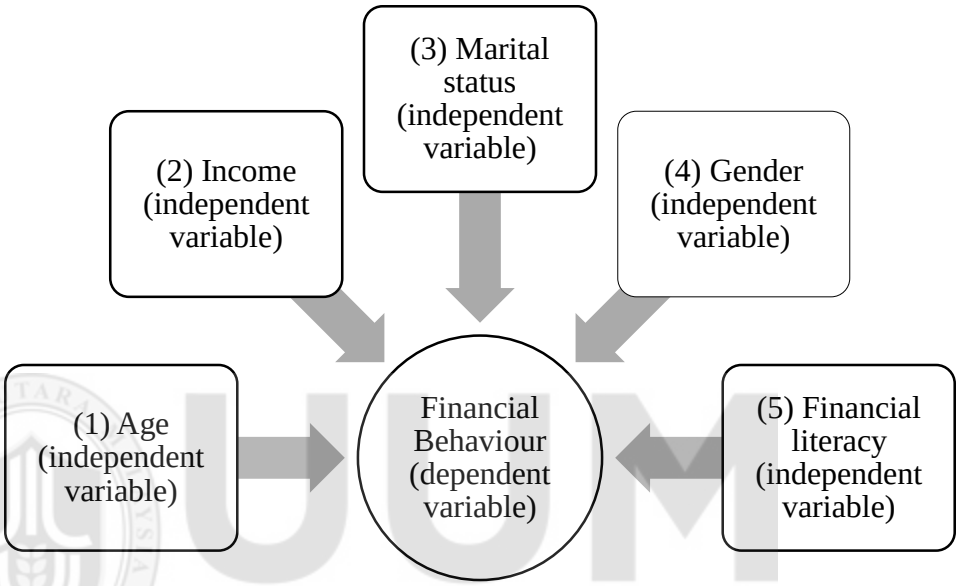

Figure 3.1:
Theoretical Framework

Age is important in determining financial behaviour because people from different age have different needs and purposes when it comes to financial matters, thus differentiate their financial practices and behaviour. The theory of life-cycle explained that people accommodate their debts or savings based on the stage of their life. Youth in their 20s are more reliant to debts, thus discourage savings. Then, they become more financially stable in their 30s and 40s allowing them to having more savings and started acquiring assets, finally the dependency to debt fall in their 50s until retirement (Legge & Heynes, 2009).

Income does determine financial behaviour. People earning higher income have the ability and capacity to fulfill their financial obligations, thus enable them to get into higher amount of debts or set aside some money for savings. In comparison, those earning lower income have to carefully adjust their expenses and other purposes such as savings to ensure the ability to fulfill their financial obligations. Therefore, those with higher income tend to have more debts and higher level of savings compare to lower income earners (Del-Rio & Young, 2005).

Marital status plays important role in determining financial behaviour. Single and married couple have different financial obligations thus influencing their financial behaviour. The role of life-cycle theory does apply to both single and married couple, however the effect is more obvious on married couple especially when they have children. Most married couple are more reliant to debts at the early stage of their marriage because they must fulfill a lot of financial obligation such as setting up home, and having children. As the time goes by, their financial position become more stable and manageable allowing them to have more savings for children's education and plan for retirement (Legge & Heynes, 2009).

Gender also influence financial behaviour because female and male have different preference and attitude towards spending money. Evident from previous research shows that unlike men, female does not possess good financial behaviour as they are more prone to compulsive buying and online shopping as well as less discipline in credit cards spending (Richa, 2012; Hussin *et. al*, 2013).

Financial literacy is important in determining financial behaviour because people with lack of financial literacy always have improper financial decision and behaviour (Ahmad *et. al*, 2010). Those with lower financial knowledge are more likely to have less understanding in financial practices and do not practice personal financial planning. Thus, financial literacy greatly influences financial behavior (Lusardi & Mitchell, 2010).

3.2 Hypothesis Development

The relationship between age and financial behaviour is related to life-cycle theory. As discussed in previous studies (Del-Rio & Young, 2005; Tudela & Young, 2003; Kempson, 2002; Legge & Young, 2010), younger people are reliant to debts at their 20s, and become less reliant to debts in their 30s until late 40s, then fall from 50s until retirement. Since the age range of sample size of youth in this research is ranging from age 15 to 40 years old, therefore the following hypothesis is developed;

> H_1: there is a significant relationship between age and financial behaviour among youth in Malaysia

The relationship between income and financial behaviour in most of previous studies shows a significant relationship between the two variables. The higher the income, the higher the debts and savings (Kempson *et. al*, 2004: Del-Rio & Young, 2005; Ming-Yen Teoh *et. al*, 2013; Cassells *et. al*, 2015). Therefore, the following hypothesis is developed;

H_2: there is significant relationship between income and financial behaviour among youth in Malaysia

Once again, evidence from previous research shows significant relationship between marital status and financial behaviour whereas married couple have more debts and spending more compare to single people (Kempson, 2002; Kempson *et. al*, 2004; Ming-Yen Teoh *et. al*, 2013; Cassells *et. al*, 2015; Chudzian *et. al*, 2015). Therefore, the following hypothesis is developed;

H_3: there is significant relationship between marital status and financial behaviour among youth in Malaysia

Previous studies have mixed results regarding the relationship between gender and financial behaviour. Most of the research agreed that women have negative financial practices compared to men (Fisher, 2010; Chudzian *et. al*, 2015; Richa, 2012; Hussin *et. al*, 2013 Achtziger *et. al*, 2015). Therefore, the following hypothesis developed;

H_4: there is a significant relationship between gender and financial behaviour among youth in Malaysia

Financial literacy is important in determining financial behaviour. Previous studies show positive relationship between financial literacy and financial behaviour whereas people with lower level of financial literacy tend to have improper financial decision and financial behaviour (Ahmad *et. al*, 2010). Therefore, the following hypothesis is developed;

H5; there is a significant relationship between financial literacy and financial behaviour among youth in Malaysia

3.3 Research Design

The purpose of this study is to test the hypothesis which is developed based on the previous studies in the same field. The study is analyse using individual as the unit of analysis and the data is gathered in one-shot or cross-sectional studies.

3.4 Conceptual Definition and Operational Definition

Conceptual definition is an abstract concept which defines a term in an academic discipline by assuming both knowledge and acceptance of theories that it depends on. It is the underlying understanding of an item or variable before understanding its application.

Operational definition on the other hand, is a clear, concise detailed definition of a measure used in collecting all types of data in a data collection.

Variables	Conceptual definition	Operational Definition
Financial behaviour	Financial behaviour is measured by individual behaviours and decisions that related to financial matters such as savings,	In this study, financial behaviour is measured based on six financial topics covering credit management, savings, spending behaviours, insurance or takaful

	consumption and spending patterns, borrowing and loan repayments, financial budgeting and other related financial decisions (Ahmad et. al, 2010).	protection, investment, and financial planning. Respondent(s) will be asked to self-assess their own opinion regarding each topic by answering the questions given in the questionnaires using the 5-point likert scale. The questions adapted from various past studies in the same field such as Kempson (2002), Ahmad *et.al* (2010), Boon *et.al* (2011), Ming-Yen Teoh *et.al* (2013) and Chudzian *et.al* (2015).
Age	Age is defined as the period of time someone has been alive (Cambridge dictionary)	In this study, the sample is represented by youth between 15 to 40 years old (National Youth Development Policy, 1997). The age of respondent(s) determined based on the year of birth. A series of age group will be given in the questionnaires. Respondent(s) will be asked to identify which age group they belong. The age group as the following;

		1 = 15-19 years 2 = 20-24 years 3 = 25-29 years 4 = 30-34 years 5 = 35-40 years The age group in past studies that also focus on "youth" as the sample is between 17 to 35 years (Survey of Malaysian Youth, 2012) and 18 to 35 years (Chudzian, 2015)
Income	Income is defined as the maximum amount that an individual can consume without reducing its real net worth. It is also known as the compensation of employees comprises wages, salaries and other benefits, in cash or any kind. The other type of income is involving investment income receipts and payments on external	In this study, income of respondent is measured based on Gross Income. Income comprises of wages, salaries, income from interest or profit basis derived from monetary or assets investment, and other benefits, in cash or any kind – which occur repeatedly within a periodic of time. Respondent(s) will be asked to identify their total gross income

	financial assets and liabilities. Gross Income is defined as the value of gross income from all sources for an individual (before deductions for income tax, superannuation, and etcetera. (Malaysia Department of Statistics, 2014)	earned per month. The income will be categorized into 4 categories. Respondent(s) have to choose the category of their income according to the following; i) Below RM2500 (Low income) ii) RM2500 – RM5000 (Lower middle-income) iii) RM5001 - RM7500 (Upper middle-income) iii) Above RM7500 (High income) The categorization of the income level is based on previous research by Embong (2014).
Marital status	Marital status is defined as the condition of being married or unmarried. However, according to Malaysia Population & Housing Census (2010), the definition of marital status consists of the following;	The respondent(s) will be asked to identify their marital status. The marital status will be categorized into 3 categories as following; i) single: unmarried respondent(s) ii) married: married respondent(s) (with or without children)

	i) Never married (single): Refers to persons who were never married. ii) Married: Refers to persons who were currently married at the time of enumeration. The term 'married', includes those married by law or by religious rites or were living together by mutual agreement. iii) Widowed: Refers to those whose marriages were terminated through death of their spouses and were not remarried at the time of enumeration. iv) Divorced / permanently separated: Refers to those whose marriages were terminated through divorce by law or religion agreement	iii) Single parent; It consists of widowed respondent(s) who was married but spouse already dismissed. It also consists of divorced respondent(s) who was married, but separated from spouse. This categorization of marital status is modified based on the definition from the Malaysian Population and Housing Census (2010).

	or separated for a long duration without any possibility of reconciliation.	
Gender	Gender is referred to social or cultural distinctions associated with being male or female (Diamond, 2002)	In this study, respondent(s) will be asked to identify gender in the questionnaire. The gender is categories into female and male.
Financial literacy	Financial literacy is a basic understanding and knowledge about financial topics (Ahmad *et. al*, 2010)	Previous study used mixed approach to measure financial literacy by asking respondents to self-assess their understanding of financial issues and concepts, while also use knowledge-based questions to measure their true knowledge about the financial topics. The questions are divided into basic level and advance level of financial literacy. This technique is adapted from previous studies by Lusardi and Mitchell (2006; 2008), Ahmad *et.al*, 2010, and Boon *et.al*, 2011).

3.5 Measurement of Variables / Instrumentation

Variables	Measurement	Description and Application of Measurement
Financial Behaviour	Individual, Ordinal scale (using 5-point likert scale), and Nominal scale (using multiple choice question)	The questionnaires consist of 30 questions covering six financial topics namely credit management, savings, spending behaviours, insurance or takaful protection, investment, and financial planning. There are 12 questions measuring credit management, 6 questions measuring savings behaviours, 5 questions measuring spending behaviours, 2 questions covering insurance or takaful protection, 2 questions measuring investment, and 3 questions measure financial planning. The answer options of the questions are mixed between multiple choice question and 5-point likert scale.

Age	Individual, Year, Ordinal scale	The age of respondent(s) is measured in year. The study uses ordinal scale to measure age group; 1 = 15-19 years 2 = 20-24 years 3 = 25-29 years 4 = 30-34 years 5 = 35-40 years
Income	Ringgit Malaysia (RM), Ordinal scale	The gross income is measured in Ringgit Malaysia (RM) currency. The study uses ordinal scale to identify the class of income; 1 = Below RM2500 2 = RM2500 – RM5000 3 = RM5001 – RM7500 3 = Above RM7500
Marital Status	Individual, Nominal scale	The study uses nominal scale to identify the respondent(s) categories of marital status: Example; 1 = single 2 = married

		3 = single parent
Gender	Individual, Nominal scale	The study uses nominal scale to identify the gender of respondent(s): example; 1 = male 2 = female
Financial Literacy	Individual, Ordinal-level index	There are a set of 10 multiple choice question in the questionnaires to evaluate the financial knowledge of respondent(s). Adapted from the previous studies by Lusardi and Mitchell (2006; 2008), Ahmad *et.al* (2010) and Boon *et.al* (2011). The same method also used in the most recent study in financial literacy by Logasvathi (2014). The questions divided into basic level and advance level. The first five questions gauge the basic financial literacy level of individuals. The questions involved fundamental knowledge on economic and

		financial conception related to knowledge about credit card, numeracy, compound interest, time value of money and inflation. The other five questions related to function of stock market, risk diversification, and mutual fund also being asked to measure the respondents' understanding regarding financial topics in advance level. The financial literacy questions scale in the questionnaire is an ordinal-level score where each correct answer scored as one point. A respondent may receive a maximum of one point for each correctly answered question; thus, with 10 questions, the score ranges from 0 to 10, with higher values representing greater financial literacy level

3.6 Data Collection

The data for this study is mainly derived from primary data source. Researcher will conduct questionnaires distribution using a set of structured questionnaires. The questionnaires are close ended with questions formulated based on previous studies with some modification to serve the purpose of the study. Meanwhile, the questionnaires will be distributed to offices, schools, colleges and university around Kota Damansara area. Although sample size recommended is 385 based on the total population of 3 million people, a sample size of 400 respondents will be collected to avoid missing data and incomplete answers. The respondents will be chosen based on their age whereas only respondents that meet the targeted age range (must be between 15 to 40 years old) will be asked to participate and answer the questions.

3.7 Questionnaires Design

Data gathered through questionnaires to measure financial behaviours of individuals, financial literacy and demographic factors. The structure of the questionnaires consists of three section. The first section is devoted into measuring the financial behaviours of respondent(s) which is the dependent variable in this study. The second section is measuring the respondents' financial literacy which is one of the independent variables. The third section consists of demographic factors questions about age, income, gender and marital status of the respondent(s) which represent independent variables in this study. There are 12

questions measuring credit management, 6 questions measuring savings behaviours, 5 questions measuring spending behaviours, 2 questions covering insurance or takaful protection, 2 questions measuring investment, and 3 questions measure financial planning.

The first section focused on measuring the respondents' financial behaviours. This section comprises of 6 financial topics that determine the financial behaviours of respondents. The first topic focuses on credit management. There are 12 questions that measure the individuals' credit management in this section. All questions are adapted from the previous study by Kempson (2002). Question 1 until 4 are multiple choice question while question 5 until 12 are measured using 5 point likert scale. The second topic devoted primarily on savings and comprise of 6 questions which are adapted and modified from the previous study by Chudzian *et.al* (2015). The first and second question are multiple choice question while third until seventh are measured using 5 point likert scale. The third topic is covering spending habits. It consists of 5 questions measuring the respondents' spending behaviours. The questions are measured using 5 point likert scale and adapted from previous studies by Ahmad *et.al* (2010), Boon *et.al* (2011) and Ming-Yen Teoh *et.al* (2013). Insurance and takaful protection is the fourth topic measured in section one consist of 2 questions measured using 5 point likert scale. Furthermore, the fifth topic is related to investment. It consists of 2 questions adapted from the study by Boon *et.al* (2011) and measured using 5 point likert scale. The last topic in section one is focus on financial planning. All

3 questions in this topic is measured using 5 point likert scale and adapted from previous studies by Ahmad *et.al* (2010) and Boon *et.al* (2011).

The second section measure financial literacy of respondents. There are a set of 10 questions in the questionnaires to evaluate the financial knowledge of individuals. Adapted from the previous studies by Lusardi and Mitchell (2006; 2008), Ahmad *et.al* (2010) and Boon *et.al* (2011). The same method also used in the most recent study in financial literacy by Logasvathi (2014). The questions divided into basic level and advance level. The separation into basic and advanced level of financial literacy provide a good platform to gain better insights as to the individuals' performance in financial literacy (Boon *et.al*, 2011). The first 5 questions gauge the basic financial literacy level of individuals. The questions involved fundamental knowledge on economic and financial conception related to knowledge about credit card, numeracy, compound interest, time value of money and inflation. The other 5 questions related to function of stock market, risk diversification, and mutual fund are also being asked to measure the respondents' understanding regarding financial topics in advance level. The financial literacy questions scale in the questionnaire is an ordinal-level score where each correct answer scored as one point. A respondent may receive a maximum of one point for each correctly answered question; thus, with 10 questions, the score ranges from 0 to 10, with higher values representing greater financial literacy level (Logasvathi, 2014).

The third section measuring demographic factors. In this section, demographic factors are age, gender, income level and marital status. Demography factors in

the questionnaire are close ended questions with options given for respondents to choose.

3.8 Sampling

Population of youth in Malaysia is 11.5 million people in 2016. From this number, more than 3 million youth live in Selangor (Malaysia Department of Statistics, 2016).

Accordingly, with 5% of margin of error, 95% of confidence level, 50% of response distribution and 3 million of population size, the recommended sample size is 385 respondents. However, to avoid any missing data and incomplete questionnaires, 400 respondents are used as the sample size in this study. The completed questionnaires will be collected for data analysis purpose. Besides that, as the population size is very large, sample size more than 30 and less than 500 are appropriate for a research (Roscoe, 1975).

Additionally, the age of respondents ranging between 15 to 40 years old. The age grouping is following the definition of youth in The National Youth Development Policy 1997.

The sample selection for this study consist of working youths and students in Kota Damansara area. The reason for this sample selection is because youth mostly consist of both students and working youth. By having both in the sample, the results are hope to be more informative and meet the purpose of this study.

This is because both students and working youth have different priority in their current life stage, therefore they could have different financial behaviours.

3.9 Data Analysis

The data collected in this study will be analyse using SPSS Statistics Version 24. Several analyses will be done to achieve the research objectives. A diagnostic test will be done by identifying missing data, outliers and reliability. Then, assumptions analysis is conducted to test for normality, linearity, homoscedasticity, multicollinearity and autocorrelation. Once the data meet all the assumptions, descriptive statistics will be analyse to describe the basic features of the data in this study. Furthermore, correlation analysis conducted to test the relationship between variables. Statistical analysis for objectives one are t-statistics and ANOVA. Meanwhile, statistical analysis for objective two is regression analysis.

3.9.1 Diagnostic Test or Data Cleaning

Data cleaning is an important step in conducting any analysis to detect possible error or mistakes in advance as well as avoid bias results. There are several important tests in data cleaning such as identifying missing data, outliers and to test for reliability.

3.9.1.1 Missing Data

Missing data happen when valid values on one or more variables are not available for the analysis (Hair *et. al*, 2010). Missing data can happen due to error in data entry and due to respondent(s) errors.

Data can be missing due to error in data entry. The error can be sort out by re-tracking the input of missing values and refill the value to run the descriptive analysis. The other reason for data to be missing is due to respondent errors. It happens when respondent was ambiguous or forgot to answer the question.

There are three approaches to overcome these problem, such as deletion methods, single imputation methods and model-based methods. Deletion methods consist of listwise methods and pairwise methods. Listwise methods also known as complete case analysis when researcher only analyses cases with available data on each variable. Pairwise deletion also known as available case analysis is when researcher analyze all cases in which the variables of interest are present.

The second approach is single imputation methods which consist of mean or mode substitution, dummy variable adjustment, and regression imputation. Mean or mode substitution refer to the approach of replacing missing value with the sample's mean or mode. Then researcher can run analysis as if all complete cases. The second option is using dummy variable adjustment. It involves creating an indicator for the missing value in the variable view. Impute missing values to a constant value (such as the mean), then include missing indicator in regression. The other option is regression imputation which involves replacing missing values with predicted score from a regression equation.

Model-based methods consist of maximum likelihood and multiple imputation. In maximum likelihood, researcher identifies the set of parameter values that produces the highest log-likelihood. Conceptually, the process is the same with or without missing data. The other option is multiple imputation where the data is filled in with imputed values using specified regression model, then analyses performed within each dataset. The results are finally pooled into one estimate.

3.9.1.2 Outliers

Outlier refer to a data point that is far outside the norm of a variable or population (Osborne & Overbay, 2004). Outliers can exist in data due to data errors, and from the inherent variability of the data.

Outliers from data errors is caused by human error in data collection, data recording or data entry. Correction can be made by returning to the original documents or subject and then re-enter the correct value, recalculating or re-estimate the correct value. In the event where the errors cannot be corrected, researcher should eliminate the data from the sample (Osborne & Overbay, 2004).

On the other part, outliers from the inherent variability of the data caused by several reasons. Firstly, intentional or misreporting by the respondent which occur when the variable in question is socially desirable. Secondly, sampling errors due to member of sample inadvertently drawn from a different population. Thirdly, standardization failure which is caused by methodology, particularly if something anomalous happened during a subject's experience, and finally due to faulty

distributional assumptions due to incorrect assumption about the distribution of the data.

Outliers can be overcome using few approaches. Firstly, by removing outliers if it illegitimately included in the data (Osborne & Overbay, 2004). Secondly, by using transformations to keep the extreme scores in the data set. In this way, the relative ranking of scores remains while the skew and error variance in the variable(s) reduced (Osborne, 2002; Hamilton, 1992).

3.9.1.3 Reliability

Reliability refer to the quality of measurement in term of its consistency or repeatability. A measure is reliable if it provides the same result repeatedly. The reliability of a measure is established by testing for both consistency and stability. Consistency indicates how well the items measuring a concept together as a set. In SPSS Statistics Version 24, it can be measure using Cronbach's alpha.

The Cronbach's alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. It is computed in terms of the average inter-correlations among the items measuring the concept. The closer Cronbach's alpha is to 1, the higher the internal consistency reliability. In many cases, Cronbach's alpha is an adequate test of internal consistency reliability (Uma Sekaran, 2003).

3.9.2 Assumption Analysis

There are several analyses need to be tested before further statistical analysis can be done using SPSS. Assumption analysis compress of normality, linearity, homoscedasticity and multicollinearity.

3.9.2.1 Normality

Normality is the shape of the data distribution for an individual metric variable. It is used to describe a symmetrical, bell-shaped curve. Normal distribution in a data can be identify by observing the shape of the histogram. If the shape of the histogram follow the bell-shaped curve, the data is normal. However, this assumption must be validated by running specific tests using SPSS Statistics.

Normality is a must for any parametric analysis, however it can be negligible if the sample size larger than 50 respondents (Altman & Bland, 1995). Power is the most frequent measure of the value of a test for normality. It can detect whether a sample comes from a non-normal distribution. The Shapiro-Wilk test provides better power than Kolmogorov-Smirkov test (Thode, 2002).

The normality distribution is measured based on kurtosis and skewness. Kurtosis is measured by peakedness (Leptokurtic) or flatness (Platykurtic) of the distribution compared to the normal distribution. The value of Kurtosis is zero (allowed to ± 2) in normal distribution (Hair *et. al*, 2010). On the other part, skewness is referring to the balance of the distribution which consist of positive distribution (left skewed) or negative distribution (right skewed). The value of skewness is zero (allowed to ± 2) in normal distribution (Hair *et. al*, 2010).

3.9.2.2 Linearity

Linearity is for multivariate techniques based on correlational measures of association including multiple regression. It assumes that the relationship between two variables should be linear or in straight line, not a curve (curvilinear). The linearity assumption can best be tested with scatter plots or Normal P-P Plot. If nonlinear relationship is indicated, transformation can be done by transforming one or both variable to achieve linearity. Additional variables also can be created to represent the nonlinear components (Hair *et. al*, 2010)

3.9.2.3 Homoscedasticity

The assumption of homoscedasticity is central to linear regression model. It assumes that the variance is the same across the regression linear which can be indicated in scatterplots. However, violation of homoscedasticity exists when the size of the error term differs across the values of independent variable. This violation is known as heteroscedasticity.

Heteroscedasticity creates problem in term of biased standard error which leads to incorrect conclusions about the significance of regression coefficients. This problem can be corrected using robust standard error provided by many statistical programs. Another approach is to transform the dependent variable using one of the variance stabilizing transformations (Hair *et. al*, 2010).

3.9.2.4 Multicollinearity

Multicollinearity referred to the situation when intercorrelations or inter-associations among the independent variables are very high. The present of

multicollinearity in the data might causing the statistical inferences to be unreliable.

Multicollinearity occurs due to several reasons such as variables are highly correlated to each other, inaccurate use of dummy variables, inclusion of variable computed from other variables in the data set, and repetition of the same kind of variable.

Severe multicollinearity can cause major problem because it increases the variance of the regression coefficients. Furthermore, the standard errors are also likely to be high, causing the partial regression coefficient not be estimated precisely. Other than that, it is difficult to assess the relative importance of the independent variables in explaining the variation caused by dependent variable. It is also difficult to reject null hypothesis when multicollinearity exist in the study.

The present of multicollinearity can be detected by several approaches. Firstly, the present of multicollinearity in the data exist when the individual outcome of a statistic is not significant, but overall outcome of the statistic is significant (mix results). Additionally, multicollinearity also exist when the coefficients of the sample differ drastically (unstable coefficient), after dividing the sample into two parts. Lastly, multicollinearity exist when the regression coefficients change dramatically after add or delete an X variable.

One way to measure multicollinearity is the variance inflation factor (VIF). It assesses how much the variance of an estimated regression coefficient increases if the predictors are correlated. The VIFs will be at 1 if no factors are correlated. If

the VIF is greater than 1, multicollinearity is moderately existed. A VIF between 5 and 10 indicates high correlation that may be problematic. While VIF more than 10 assume that the regression coefficients are poorly estimated due to multicollinearity (Hair *et. al,* 2010).

Correlation matrix is another test of multicollinearity between the independent variables using Pearson Correlation test. The general rule is if the correlation between two independent variables is between -0.7 and 0.7, there is no problem using both variables because they are not correlated (Hair *et.al,* 2007).

3.9.3 Descriptive Statistics

Descriptive statistics is used to describe the basic features of the data in a study, providing simple summaries about the sample and the measures. It is simply describing what is or what the data shows and used to present quantitative descriptions in a manageable form.

There are three major characteristics in descriptive statistics namely the distribution, central tendency, and dispersion.

The first characteristic of descriptive statistics is distribution. It is known as a summary of the frequency of individual values or ranges of values for a variable (Trochim, 2006). A frequency distribution is the most common ways to describe a single variable which is done by determining the frequency of each value of the variable. On the other hand, if large number of possible values involves such as age, and income, grouping the value into ranges or categories is common, then determine the frequency of each categories or ranges. Frequency distribution can

be presented in graph (usually using histogram or bar chart) or percentage (such as age group or income level).

The second characteristic is the central tendency. It is used to estimate the "center" of a distribution of values. The characteristic compress of three major types of estimates namely mean, median, and mode. Firstly, mean is the average value of a variable. It is computed by adding up all the values and divide by the number of values. Secondly, median is the value found at the exact middle of the set of values. It is computed by listing all values in numerical order, then the median is located at the center of the sample. Lastly, mode is the most frequently occurring value in the set of value. If the distribution is truly normal (bell-shaped), the mean, median and mode are all equal.

The third characteristic of descriptive statistics is the dispersion. It refers to the spread of the values around the central tendency. The two common measures of dispersion are range and standard deviation. The range is also known as the difference of the highest value and the lowest value, calculated by subtracting lowest value from the highest value. The weakness of using range as the measure of dispersion is because it can be easily exaggerated if outliers exist. Standard deviation on the other hand is more accurate and details estimation of dispersion compare to the range.

3.9.4 Correlation Analysis

Correlation is a bivariate analysis. It is an analysis to measure the strength of association between two variables. The strength of association between the

variables is measured in the scale of 0 to 1. The closer the value to ±1 meaning the stronger the relationship between variables. As the value of correlation coefficient goes towards 0, the relationship between variables become weaker (Hair *et.al*, 2007). The scale of correlation coefficient and its value is represented in Table 3.1 below.

Table 3.1

Rule of Thumb on the Correlation Coefficient Scale

Scale of correlation coefficient	Value
0.8 to 1	Very high correlation
0.6 to 0.79	High correlation
0.4 to 0.59	Moderate correlation
0.2 to 0.39	Low correlation
0 to 0.19	Very low correlation

Source: Hair *et. al*, 2007

There are three type of correlations analysis in statistics that can be tested using SPSS which are Pearson correlation, Kendall rank correlation, and Spearman correlation.

Pearson correlation is the one widely used in statistics to measure the degree of the relationship between linear related variables in a parametric test. However, before using Pearson correlation, the following assumptions must be met. It assumes that the variables must be normally distributed, that the data should have met the assumption of linearity and homoscedasticity.

On the other hand, Kendall rank correlation and Spearman rank correlation are non-parametric tests. Both tests do not require any assumptions about the distribution of the data. Hence, they are the appropriate test for correlation analysis when the variables are not normally distributed but at least in ordinal scale.

3.9.5 Independent sample t-test

An independent sample t-test is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups. In other words, it compares the means between two unrelated groups on the same continuous, dependent variable. There are six assumptions that the data must meet before researcher can run a t-test and to give valid result.

The first assumption is that a dependent variable should be measured on a continuous scale. Secondly, it is also assumed that independent variable should consist of two categorical, independent groups such as male or female for gender. The third assumption is that there should be independence of observations which is mostly related to study design issue. It means that there is no relationship between the observations in each group or between the groups themselves. If the study fails this assumption, researcher will need to use another statistical test. Furthermore, it also assumes that there should be no significant outliers. This is because the present of outliers can have negative effect on the independent t-test, reducing the validity of the results. In addition, the test assume that the dependent variable should be approximately normally distributed for each group of the independent variable. If the normality assumption violated, researcher has two

options. The first option is to transform data so that data becomes normally distributed. The second option is to run the Mann-Whitney U test which is a non-parametric test that does not require the assumption of normality.

Lastly, independent sample t-test assumes the homogeneity of variance. The variances of the two groups measured is assume to be equal in the population. Unequal variance can affect the Type I error rate. This assumption can be tested using Levene's Test of Equality of Variances, which is produced in SPSS Statistics when running the independent t-test procedure. If the significance value is greater than 0.05, the group variances is treated as equal. While if it is lesser than 0.05, treated as unequal and violated the assumption.

3.9.6 One Way ANOVA

One-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of three or more independent (unrelated) groups. It compares the means between the groups that researcher interested in and determines whether any of those means are statistically significantly different from each other. This is important in testing the null hypothesis. If one-way ANOVA returns a statistically significant result, researcher will accept the alternative hypothesis.

One-way ANOVA is an omnibus test statistics and unable to tell which specific groups were statistically significantly different from each other. To determine that, researcher need to use a post hoc test.

There are two assumptions that the data must meet for one-way ANOVA to give valid result. The first assumption is that the dependent variable is normally distributed in each group that is being compared in one-way ANOVA. If the data fail this assumption, there are two options to correct the problem. The first option is to transform data using various algorithms so that the shape of distributions become normally distributed. The second option is to use the nonparametric Kruskal-Wallis H Test which does not require the assumption of normality. The second assumption is the homogeneity of variance, whereas the population variances in each group are equal. This can be tested using Levene's Test of Equality of Variances. If the data violated this assumption, there are two tests that researcher are applicable to use which is Welch or Brown-Forsythe test.

3.9.7 Regression Analysis

The core principle of regression is to investigate the relationship between dependent and independent variables. Researcher then will be able to determine the strength of the relationship between these two variables.

There are two basic types of regression namely simple linear regression and multiple linear regression. Simple linear regression uses one independent variable to explain or predict the outcome of the dependent variable. On the other part, multiple linear regression uses two or more independent variables to predict the outcome of the dependent variable.

The multiple regression will only give valid result if the data meet several assumptions. Firstly, dependent variable should be measured on a continuous

scale, either an interval or ratio variable. If dependent variable is measured on an ordinal scale, researcher will need to carry out ordinal regression rather than multiple regression. Secondly, the data must have two or more independent variables, which can be either continuous (i.e., an interval or ratio variable) or categorical (i.e., an ordinal or nominal variable). If one of independent variables is dichotomous and considered a moderating variable, researcher might need to run a Dichotomous moderator analysis. Furthermore, the study should have independence of observations (i.e., independence of residuals), which can easily be checked using the Durbin-Watson statistic, which is a simple test to run using SPSS Statistics.

Moreover, there needs to be a linear relationship between the dependent variable and each of independent variables, and between the dependent variable and the independent variables collectively.

Additionally, the data needs to show homoscedasticity, which is where the variances along the line of best fit remain similar as it moves along the line. The data also must not show multicollinearity, which indicate high correlation between two or more independent variables. This is because multicollinearity leads to problems with understanding which independent variable contributes to the variance explained in the dependent variable, as well as technical issues in calculating a multiple regression model.

There should also no significant outliers, high leverage points or highly influential points in the data. All these points can have a very negative effect on the regression equation that is used to predict the value of the dependent variable

based on the independent variables. This can change the output that SPSS Statistics produces and reduce the predictive accuracy of the results as well as the statistical significance. Fortunately, all these can be detected when using SPSS Statistics to run multiple regression on the data.

It is also important to check that the residuals (errors) are approximately normally distributed. There are two common methods to check this assumption. The first method is using histogram, with a superimposed normal curve and a Normal P-P Plot. The second method is using Normal Q-Q Plot of the standardized residuals.

Regression equation is developed to predict the variable(s). The formula for a simple linear regression shows that "y" as the value researcher try to predict, the "b" is the slope of the regression, while "x" is the value of independent value, and the "a" represents the y-intercept which represent the dependent variable.

The regression equation simply describes the relationship between the dependent variable (y) and the independent variable (x). Linear regression attempts to estimate a line that best fits the data, and the equation of that line results in the regression equation.

Simple linear regression equation; $Y = bx + a$

Multiple linear regression equation; $Y = a + b1*X1 + b2*X2 + ... + bp*Xp$

3.10 An Econometric Model

Based on research framework, econometric model in this study is:

Model 1

$$FB_{it} = B_0 + B_1\, Age_{it} + B_2\, Income_{it} + B_3\, Marital_{it} + B_4\, Gender_{it} + B_5\, FL_{it} + \in_{it}$$

...

Where,

- FB = Financial behaviour
- FL = Financial literacy
- $\in_{it}$ = error term
- B_0 = constant
- B_1, B_2, B_3, B_4, B_5 = coefficient of parameters

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This section conduct illustrative and inferential examination of the information produced from the earlier chapter. The information is gathered and collected from the survey distributed to respondents at several premises such as university, schools, and offices around Kota Damansara, Petaling Jaya, Selangor. The data collected from 17th November 2016 until 3rd December 2016.

Firstly, a pilot test conducted among 30 respondents to ensure the reliability of the questions in the questionnaire. The data collected from the pilot test is analysed using the SPSS Statistics Version 24 to test for its reliability using the Cronbach's Alpha analysis. The detail results of this test are discussed further in the next section of this chapter.

After pass the reliability test, a total of 600 set of questionnaires distributed to respondents for actual data collection. However, only 400 completed questionnaires returned by the respondents. The answers in the completed questionnaires are checked manually for any missing data and outliers. Each set of questionnaires answers are saved in an excel file format before transferred to SPSS data view. For the analysis in this study, SPSS Statistics Version 24 is chosen because of its ability to analyse the data easily to meet the objectives of this study. The data are specifically coded to ensure that all data will be able to be transfer smoothly to SPSS Statistics Version 24 for further analysis.

The dependent variable and independent variables are analyse to test for the diagnostic test, assumption analysis, descriptive analysis, correlation analysis, t-statistics, one way ANOVA and regression analysis.

4.1 Diagnostic tests

Diagnostic tests are the first step before proceed for the assumption analysis. It consists of testing for any missing value, outliers and reliability.

4.1.1 Missing Value

Missing value can be detected when analysing descriptive analysis for frequency in SPSS. The missing value is indicated in the variable view of the SPSS to be able to detect it when running the analysis.

Table 4.1
Detection of Missing Value

		Financial literacy (total score)	Age	Gender	Income	Marital Status
N	Valid	400	400	400	400	400
	Missing	0	0	0	0	0

Source: SPSS Statistics Version 24

The result in Table 4.1 above shows the detection method for missing value by running the descriptive statistics analysis for frequency in SPSS Statistics Version 24. By referring to the "Missing" row, it shows the value of 0 for all independent

variables (financial literacy, age, gender, income and marital status) indicating no missing value. Hence, there is no missing value in the data.

4.1.2 Outliers

Outlier is a data point far outside the norm for a variable in a data set which must be eliminated from the data to meet the assumption of some analysis. Without eliminating the outlier, the assumption is violated and the analysis cannot be used. Researcher found 4 outlier cases and the outliers have been treated. The outlier cases are 133, 196, 286 and 337. Therefore, there is no outliers in this study.

4.1.3 Reliability Test

Reliability refer to the quality of measurement in term of its consistency or repeatability. Cronbach's Alpha is the test for reliability used for this purpose, using data collected from a pilot test conducted among 30 respondents. The Cronbach's Alpha indicates how well the items in a set of questions are positively correlated to one another. The closer Cronbach's Alpha is to 1, the higher the internal consistency reliability.

Table 4.2
Result of the Reliability Test in Cronbach's Alpha

Reliability Statistics

Cronbach's Alpha	N of Items
.839	30

Source: SPSS Statistics Version 24

Using the SPSS Statistics Version 24, the analysis result of Cronbach Alpha test is derived in Table 4.2. The result of Cronbach's Alpha test must be 0.7 and above to be acceptable in consistency and reliability (Uma Sekaran, 2003). Since the result of Cronbach's Alpha test is 0.839 which is above 0.7 and closer to 1, the set of questions in the questionnaire is consistent and reliable for this study. Therefore, the questionnaires can be distributed to the respondents for actual data collection purpose.

4.2 Assumption analysis

Assumption analysis is crucial in data analysis. The data must meet the following assumptions before can proceed for further analysis.

4.2.1 Normality

Test of normality can be done using Kolmogorov-Smirnov test and Shapiro-Wilk in SPSS. By using this test, the data is normally distributed if the significance value is more than 0.05. However, this assumption can be negligible if the sample size larger than 50 respondents (Altman & Bland, 1995). Furthermore, normality distribution is also being measured based on the value of kurtosis and skewness. The value of kurtosis and skewness is allowed to ± 2 in normal distribution (Hair *et. al*, 2010).

Based on the histogram in Figure 4.1, the shape of the histogram follow the bell-shape curve which indicate normal distribution. However, the shape of histogram alone is not a strong evident to confirm the data is normally distributed.

Therefore, the test of normality is done by referring to the value of skewness and kurtosis.

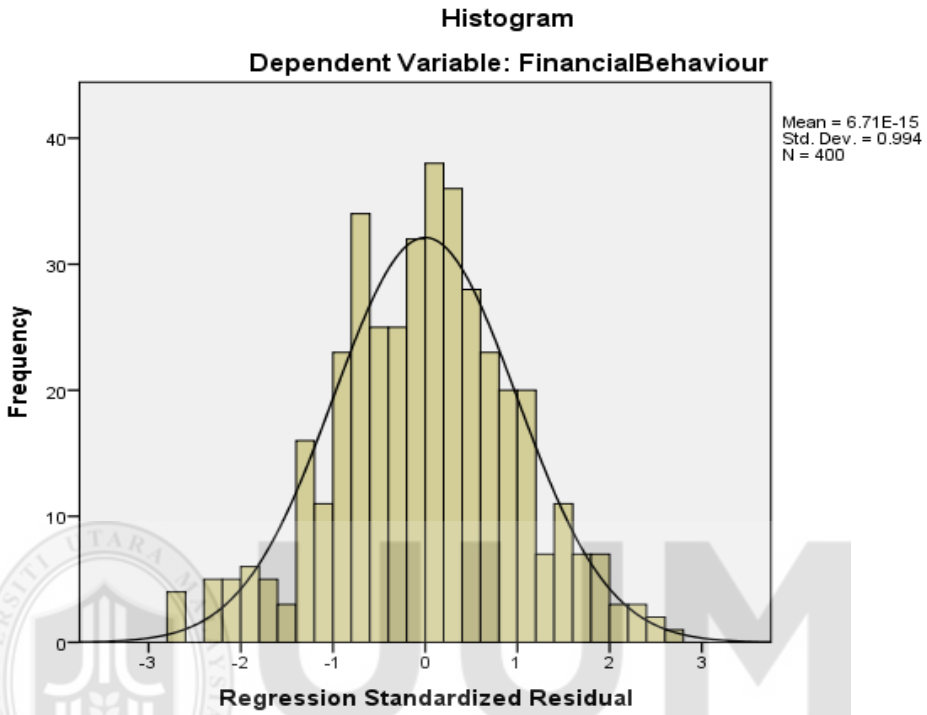

Figure 4.1
Histogram of Normal Distribution Curve for Financial Behaviour
Source: SPSS Statistics Version 24

Based on Table 4.3, the value of skewness and kurtosis for Financial Behaviour (dependent variable) is -.066 and .196 respectively. This value is within the normal distribution range ± 2 (Hair *et.al*, 2010). Therefore, the data is normally distributed and this assumption is met.

Table 4.3
Skewness and Kurtosis Values for Financial Behaviour, Financial Literacy, Age, Gender, Income, and Marital Status

Variable	Skewness	Kurtosis

Financial Behaviour	-.066	.196
Financial Literacy	.472	-.032
Age	.481	-.274
Gender	-.212	-1.965
Income	1.367	2.109
Marital Status	1.028	.059
Std. Error	.122	.243

Source: SPSS Statistics Version 24

4.2.2 Linearity

The linearity assumption is tested using the scatter plots or by using Normal P-P Plot. The relationship is linear if the graph is in straight line.

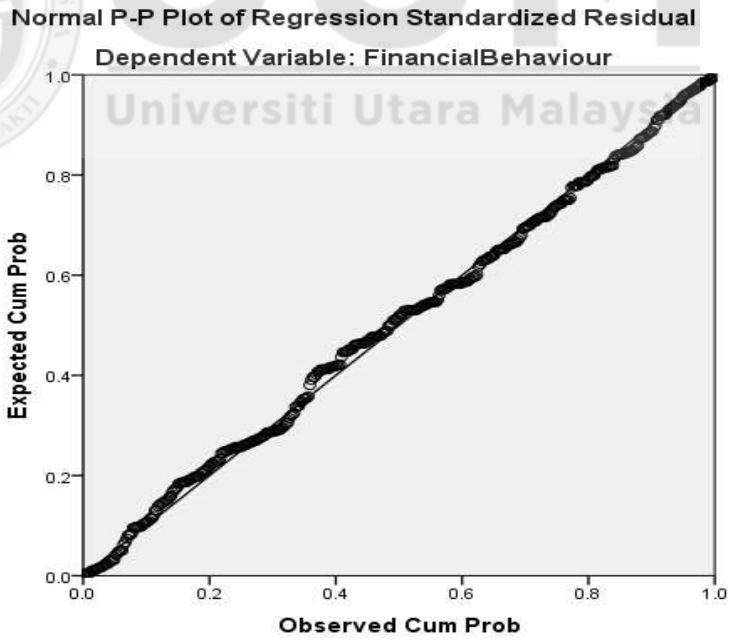

Figure 4.2
Normal P-P Plot of Regression Standardized Residual for Financial Behaviour
Source: SPSS Statistics Version 24

The graph for dependent variable: financial behaviour is in straight line in Figure 4.2, indicating linearity for dependent variable follow the Normal P-P Plot for financial behaviour. Therefore, the assumption of linearity is met.

4.2.3 Multicollinearity

Multicollinearity referred to the situation when intercorrelations among the independent variables are very high. The variance inflation factor (VIF) is used for testing the multicollinearity. A VIF equal to 1 meaning no factors are correlated. If the VIF is greater than 1, multicollinearity is moderately existed but still acceptable. A VIF between 5 and 10 indicates high correlation that may be problematic while VIF more than 10 assume that the regression coefficients are poorly estimated due to multicollinearity.

Table 4.4
Test of Multicollinearity using Variance Inflation Factor (VIF)

Model		Collinearity Statistics	
1		Tolerance	VIF
	(Constant)		
	Financial Literacy	.966	1.035
	Age	.399	2.505
	Gender	.976	1.024
	Income	.583	1.714
	Marital Status	.490	2.036

Dependent Variable: Financial Behaviour
Source: SPSS Statistics Version 24

The result of the variance inflation factors (VIF) of all the independent variables (financial literacy, age, gender, income, and marital status) is shows in Table 4.4. The value of VIF for financial literacy, age, gender, income and marital status are 1.035, 2.505, 1.024, 1.714 and 2.036 respectively. All VIF values are closer to 1 and less than 5 which indicates very low correlations between variables, therefore indicates no multicollinearity.

Correlation matrix is another test of multicollinearity between the independent variables using Pearson Correlation test. The general rule is if the correlation between two independent variables is between -0.7 and 0.7, there is no problem using both variables because they are not correlated.

The result in Table 4.5 shows that the correlation between independent variables of financial literacy, age, income, marital status and gender are -.162, -.116, -.159 and .040 respectively. All the relationship is below ± 0.7 which indicates low correlations between independent variables, therefore there is no multicollinearity exist and this assumption is met.

Table 4.5
Correlations Matrix between Financial Literacy, Age, Income, Marital Status, and Gender

		Financial Literacy	Age	Income	Marital Status	Gender
Financial Literacy	Pearson Correlation	1	-.162**	-.116*	-.159**	.040
	Sig. (2-tailed)		.001	.020	.001	.428
Age	Pearson Correlation	-.162**	1	.636**	.705**	.123*

	Sig. (2-tailed)	.001		.000	.000	.014
Income	Pearson Correlation	-.116*	.636**	1	.520**	.040
	Sig. (2-tailed)	.020	.000		.000	.423
Marital Status	Pearson Correlation	-.159**	.705**	.520**	1	.116*
	Sig. (2-tailed)	.001	.000	.000		.021
Gender	Pearson Correlation	.040	.123*	.040	.116*	1
	Sig. (2-tailed)	.428	.014	.423	.021	

Source: SPSS Statistics Version 24

4.2.4 Homoscedasticity

The assumption of homoscedasticity is central to linear regression model. It assumes that the variance is the same across the regression linear. This can be explained by referring to the scatterplot in Figure 4.3 below. The dots are scattered at the center with no clustering or systematic patterns in plotting which indicates the variance is the same across the regression linear. Hence, the assumption of homoscedasticity is met.

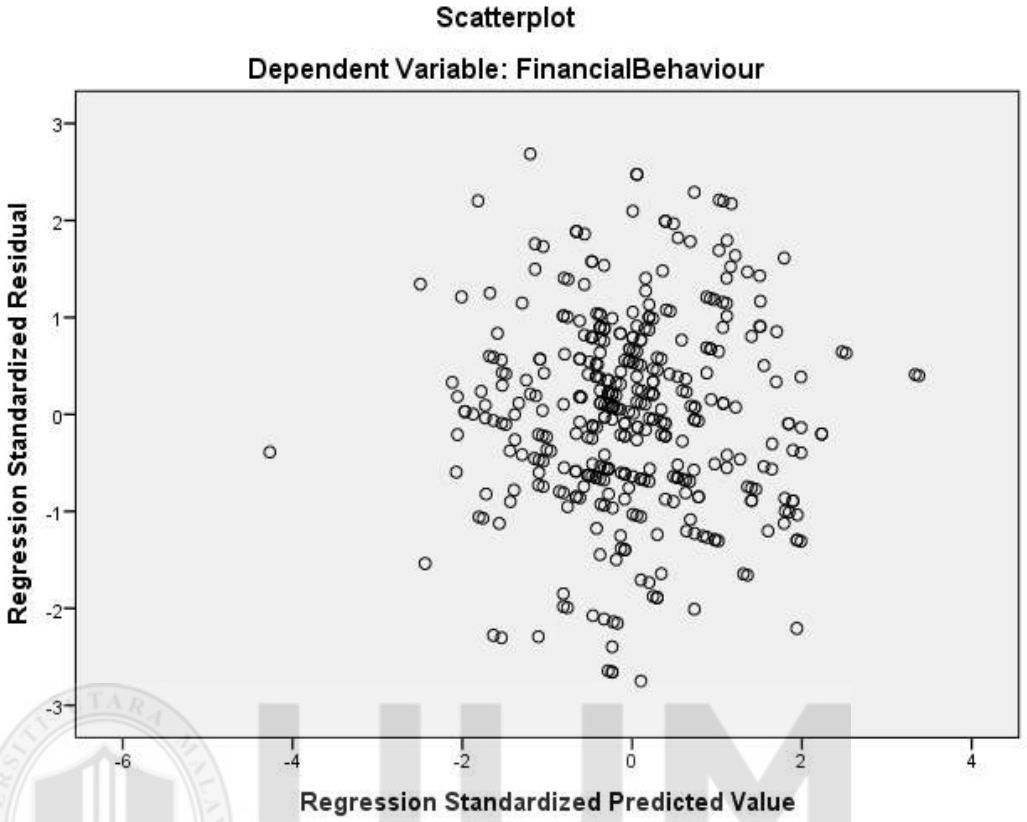

Figure 4.3
Scatterplot of Financial Behaviour
Source: SPSS Statistics Version 24

4.2.5 Autocorrelations

One of the important assumption in regression is that the error terms are independent of each other. Durbin-Watson test is one of the test available in SPSS to determine whether autocorrelation exist in the data.

The Durbin-Watson test statistics values is between 0 to 4. A statistics value of 2 indicates no autocorrelation, a value less than 2 indicates positive autocorrelation, while value of more than 2 indicates negative autocorrelation (Field, 2009).

The rule of thumb is that statistics values in the range of 1.5 to 2.5 are relatively normal. While values under 1 or more than 3 indicates autocorrelation (Field, 2009).

Table 4.6
Durbin-Watson Test of Autocorrelation

Model	Durbin-Watson
1	1.973

Source: SPSS Statistics Version 24

The statistics value of Durbin-Watson test in Table 4.6 is 1.973, which is closer to 2. This statistics value is in the range of 1.5 to 2.5 which is relatively normal. Hence, there is no autocorrelation and this assumption is met.

4.3 Descriptive Analysis

Table 4.7
Descriptive Statistics for Financial Behaviour, Age, Gender, Income, Marital Status, and Financial Literacy

Variable	Mean	Minimum	Maximum	Standard Deviation
Financial Behaviour	3.18	1	5	.304
Age	2.81	1	5	1.072
Gender	1.55	1	2	.498

Income	1.56	1	4	.712
Marital Status	1.43	1	3	.588
Financial Literacy	3.68	0	10	1.844

Source*:* SPSS Statistics Version 24

Table 4.7 shows the mean and standard deviation scores for financial behaviour, age, gender, income, marital status, financial literacy. The overall mean scores for financial behaviour as dependent variable is 3.18 and with standard deviation of .304 which shows that the spread of scores are very close to the mean.

As for the independent variables, financial literacy scored the highest mean with 3.68, followed by age with 2.81. Meanwhile mean scores for income level, gender, and marital status are the lowest with 1.56, 1.55 and 1.43 respectively. The standard deviation scores for financial literacy and age are higher than gender and marital status, implying a wider variation of responses for both variables.

Table 4.8

Frequency Distribution for Age, Gender, Income, Marital Status, and Total Score of Financial Literacy

Variable	Frequency	Valid Percent (%)
Age		
15-19 years	33	8.3
20-24 years	137	34.3
25-29 years	145	36.3
30-34 years	45	11.3
35-40 years	40	10.0

Gender		
Male	179	44.8
Female	221	55.3
Income		
Below RM2500	215	53.8
RM2500 – RM5000	157	39.3
RM5001 – RM7500	16	4.0
Above RM7500	12	3.0
Marital Status		
Single	249	62.3
Married	131	32.8
Single Parent	20	5.0
Financial Literacy (total score)		
Total Score 0	17	4.3
Total Score 1	22	5.5
Total Score 2	71	17.8
Total Score 3	85	21.3
Total Score 4	80	20.0
Total Score 5	58	14.5
Total Score 6	41	10.3
Total Score 7	15	3.8
Total Score 8	8	2.0

Total Score 9	3	0.8
Total Score 10	0	0.0

Source: SPSS Statistics Version 24

Table 4.8 shows the frequency distribution for age, gender, income, marital status, and total score of financial literacy. The age of respondents in this study is divided into 5 age group. Majority of respondents is between the age of 20 to 29 years old which made up 70.6% of total respondents. The main reason of their huge percentage is because most of the respondents are students and working youth within this age group, hence their number are the largest. It is followed by respondents between age of 30 to 34 years old with 11.3%, age group of 35 to 40 years old with 10% and the smallest group is respondents between age of 15 to 19 years old with 8.3%.

Meanwhile, gender represented by male and female. Their proportion in this study is balanced with the number of female respondents is slightly higher than male. Female represent 55.3% out of the total respondents. While male represent 44.8%.

As for the income, respondents in this study are divided into four categories of income level, lower income (below RM2500), lower middle-income (RM2500 – RM5000), higher middle-income (RM5001 – RM7500), and higher income (above RM7500). The largest number of respondents represented by the lower income earner (income below RM2500) with 53.8% of total respondents. The second largest is the lower middle-income earner (income RM2500 to RM5000) with 39.3% out of total respondents. Only 4% of respondents earning income

between RM5001 to RM7500 followed by another 3% earning above RM7500. This result shows that most of youth in Kota Damansara are earning RM5000 and below. This is mainly because they are either students with no fixed income and still depending on their parents, or working youth who are in the executive level with average income within this range.

Furthermore, for the marital status majority 62.35% respondents are single, followed by married respondents represent 32.8%, while only 5% are single parent. This result shows that most of youth in Kota Damansara are single and less than a quarter of them are married.

Lastly, the total score of financial literacy. The results show only 16.75% of respondents able to score between 6 to 9 correct answer, while another 83.25% scored 5 and below. There is none of respondent manage to score perfect 10. This result shows that youth in Kota Damansara have poor financial literacy level. This could be due to lack of focus on financial related education in school and tertiary education level causing youth to have such poor financial literacy level.

4.4 Correlation Analysis

Correlation analysis is used to measure the strength of association between dependent variable and independent variables in this study. Since the data met all the assumptions for Pearson correlation test, it is the appropriated test to use for this analysis.

Table 4.9
Correlation Matrix between Dependent Variable and Independent Variables

		Financial Behaviour	Financial Literacy	Age	Income	Marital Status	Gender
Financial Behaviour	Pearson Correlation	1					
	Sig. (2-tailed)						
Financial Literacy	Pearson Correlation	-.070	1				
	Sig. (2-tailed)	.160					
Age	Pearson Correlation	.164**	-.162**	1			
	Sig. (2-tailed)	.001	.001				
Income	Pearson Correlation	-.042	-.116*	.636**	1		
	Sig. (2-tailed)	.405	.020	.000			
Marital status	Pearson Correlation	.072	-.159**	.705**	.520**	1	
	Sig. (2-tailed)	.151	.001	.000	.000		
Gender	Pearson Correlation	-.031	.040	.123*	.040	.116*	1
	Sig. (2-tailed)	.532	.428	.014	.423	.021	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: SPSS Statistics Version 24

The correlation matrix of Pearson correlation test to analyse the relationship between dependent variable (financial behaviour) and independent variables (financial literacy, age, income, marital status and gender). The variables are correlated when the significant level is equivalent or less than 1%, 5%, and 10%.

From the result in Table 4.9, only age is significantly correlated with financial behaviour at 10% significant level with 16.4% correlation. It shows that financial behaviour has a positive significant correlation with age. However, as the percentage of the correlation is 16.4% which is less than 20%, the correlation between financial behaviour and age are very low.

4.5 Regression analysis

The core principle of regression is to investigate the relationship between dependent and independent variables and to determine the strength of the relationship between the variables.

After all the assumptions for regression analysis is met, the regression analysis is conducted using the SPSS Statistic Version 24. The following explain the findings.

4.5.1 Model Summary

Table 4.10
Model Summary

Model	R	R Square	Adjusted R Square
1	.264[a]	.070	.058

a. Predictors: (Constant), Marital status, Gender, Financial Literacy, Income, Age
b. Dependent Variable: Financial Behaviour
Source: SPSS Statistics Version 24

Based on result in the Table 4.10, it shows that the adjusted R Square value is 0.058 which indicates that 5.8% of the total variation in the financial behaviour

among youth in Malaysia can be explained by the significant independent variables. The small value of adjusted R Square is because only two of independent variables, which is age and income are statistically significant with financial behaviour in this study. Over the years, many other researches around the world have been conducted in this topic which might use other variables as the independent variables which are not included in this study.

4.5.2 ANOVA

Table 4.11
ANOVA

Model		F	Sig.
1	Regression	5.894	.000[b]

a. Dependent Variable: Financial Behaviour
b. Predictors: (Constant), Marital status, Gender, Financial Literacy, Income, Age
Source: SPSS Statistics Version 24

Based on ANOVA analysis in Table 4.11, the F-value of 5.894 is significant when the significant level is less than 10%. The significant value of 0.000 indicates that all independent variables are significant to the dependent variable in this study and that the model is fit to use for further analysis. It indicates that the overall regression model with the independent variables (financial literacy, age, income, marital status and gender) can well explain the variation of the dependent variable (financial behaviour).

4.5.3 Coefficients Analysis

Coefficient analysis is used to analyze the significant level of the variables as well as testing for the hypothesis whether to accept or reject. A significant level

equivalent or less than 10% indicates that the variable is significant, hence the hypothesis is accepted. Otherwise, the hypothesis will be rejected.

Based on result in Table 4.12 below, only age and income are significant with financial behaviour with probability value of 0.000 for both. While financial literacy, gender, and marital status are not significant with financial behaviour as the probability value are 0.338, 0.247, and 0.446 respectively.

Table 4.12
Coefficients

Model		Standardized Coefficients value	T-value	Probability value
1	(Constant)		32.055	.000
	Financial Literacy	-.047	-.960	.338
	Age	.355	4.617	.000
	Gender	-.057	-1.160	.247
	Income	-.243	-3.826	.000
	Marital Status	-.053	-.763	.446

Correlation is significant at the 0.10 level (2-tailed).
a. Dependent Variable: Financial Behaviour
Source: SPSS Statistics Version 24

The relationship between age with financial behaviour is explained by the coefficient value. Based on the result in Table 4.12, age has a coefficient value of 0.355 which indicates a positive relationship between age and financial behaviour. It shows that an increase of 1 unit in age will increase the level of financial behaviour by 0.355 0r 35.5%. In another word, the older the youth, the better their financial behaviour. This result support the life-cycle theory and finding in previous studies by Legge and Heynes, 2009; Tudela & Young, 2003; 2004; Del-

Rio & Young, 2005; Kempson, 2002; Kempson *et. al*, 2004 which mention that older individuals have better financial behavior compared to younger individuals.

An ANOVA test was conducted to support this finding. The result of one-way ANOVA ($F(4,395) = 3.272$, $p = .012$) test as shown in Table 4.13 found that there is a statistically significant difference between the mean in age group. A Tukey post hoc test (Table 4.15) revealed that age group 35 to 40 years (3.2827 ± .21714) has good financial behavior compared to younger age, followed by age group 25 to 29 years (3.2125 ± .27646). Youth in age between 30 to 34 years (3.2094 ± 3.2094) is on average. While else, age group 15 to 19 years (3.0513 ± .28454) have very poor financial behavior. Followed by age group 20 to 24 years (3.1609 ± .31714).

Table 4.13
one-way ANOVA *test*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.184	4	.296	3.272	.012
Within Groups	35.722	395	.090		
Total	36.906	399			

Note: Dependent Variable is Financial Behaviour
Source: SPSS Statistics Version 24

Table 4.14
Mean and Standard Deviation for Age Group

Descriptives

Age	N	Mean	Standard Deviation
15-19 years	33	3.0513	.28454
20-24 years	137	3.1609	.31714

25-29 years	145	3.2125	.27646
30-34 years	45	3.2094	.38754
35-40 years	40	3.2827	.21714
Total	400	3.1882	.30413

Source: SPSS Statistics Version 24

Table 4.15
Tukey Post Hoc Test for Financial Behaviour and Age Group

Multiple Comparisons

Age group	(J) Age group	Mean Difference (I-J)
15-19 years	20-24 years	-.10958
	25-29 years	-.16118*
	30-34 years	-.15812
	35-40 years	-.23141*
20-24 years	15-19 years	.10958
	25-29 years	-.05160
	30-34 years	-.04854
	35-40 years	-.12183
25-29 years	15-19 years	.16118*
	20-24 years	.05160
	30-34 years	.00307
	35-40 years	-.07023
30-34 years	15-19 years	.15812
	20-24 years	.04854
	25-29 years	-.00307
	35-40 years	-.07329
35-40 years	15-19 years	.23141*

20-24 years	.12183
25-29 years	.07023
30-34 years	.07329

Note: Dependent Variable is Financial Behaviour
Source: SPSS Statistics Version 24

On the other hand, income has a coefficient value of -0.243 which indicates negative relationship between income and financial behaviour. It means that an increase of 1 unit in income will decrease the level of financial behaviour of youth by -0.243 or -24.3%. This finding shows that the higher the income the poorer their financial behaviours and vice versa.

This result support finding in previous studies by Kempson *et.al*, 2004; Cassells *et.al*, 2015, Del-Rio & Young, 2005 and Ming-Yen Teoh *et.al*, 2013 which found that people with higher income have poor financial behavior such as have more debts, lower savings, and spend more on credit cards.

The cross-tabulation test result in Table 4.16 below shows that the number of youth that spend more than 30% of their income to pay off loans and other debts increases as the income increase, which is a sign of poor financial practice and behaviour.

Table 4.16
Proportion of monthly payment for loans and other debts based on income level

	Income level				
Proportion of monthly payment for loans and	Below RM2500	RM2500 – RM5000	RM5001 – RM7500	Above RM7500	Total

other debts		RM5000			
None	95	36	1	0	132
Less than 10%	21	13	5	4	43
Between 10% to 30%	74	61	3	0	138
More than 30%	25	47	7	8	87
Total	215	157	16	12	400

Source: SPSS Statistics Version 24

One of the reason of this problem is due to lifestyle. Living in an area such as Kota Damansara with higher standard of living and urban lifestyle does influence youth to become a big spender especially when they have higher income. This is because some people assume that spending for branded, luxury and expensive material things as one way of rewarding themselves after all the hard work earning the money.

Table 4.17
Testing for Hypothesis

Hypothesis	Significant	Result
H_1: there is a significant relationship between age and financial behaviour among youth in Malaysia	.000	Accepted
H_2: there is significant relationship between income and financial behaviour among youth in Malaysia	.000	Accepted

H_3: there is significant relationship between marital status and financial behaviour among youth in Malaysia	.446	Rejected
H_4: there is a significant relationship between gender and financial behaviour among youth in Malaysia	.247	Rejected
H_5; there is a significant relationship between financial literacy and financial behaviour among youth in Malaysia	.338	Rejected

Source: SPSS Statistics Version 24

From the result of Coefficient in Table 4.12, the following hypothesis, which developed earlier in Chapter 3 is tested and the result is shown in Table 4.17 above.

The first independent variable is age. Age has significant level of 0.000, which is less than 10%, indicates a significant relationship with financial behaviour. As the coefficient value is 0.355, it shows a positive relationship between age and financial behaviour. Hence, H_1 is accepted.

The second independent variable, which is income has significant level of 0.000 which is less than 10%, indicates a significant relationship with financial behaviour. As the coefficient value is -0.243, it shows a negative relationship between income and financial behaviour. Hence, H_2 is also accepted.

As for marital status, the significant level of 0.446 is more than 10%, therefore marital status is not significant with financial behaviour. Hence, H_3 is rejected.

Furthermore, the significant level for gender is 0.247 which is more than 10%, therefore gender is not significant with financial behaviour. Hence, H_4 is rejected.

Finally, financial literacy has significant level of 0.338 which is more than 10%. Therefore, financial literacy is not significant with financial behaviour. Hence, H_5 is also rejected.

4.6 Conclusion

Based on the analysis conducted in this chapter, it is concluded that the study had answered the research objectives in Chapter 1.

The first objective was to investigate the relationship between demographic factors and financial behaviour among youth in Malaysia. Based on the result from correlation analysis in 4.4, only age is significantly correlated with financial behaviour at 10% significant level with 16.4% which is a positive relationship. Though, the strength of the relationship is very low as it is lower than 20%.

The second objective was to identify the factors that influence financial behaviour among youth in Malaysia. Based on the result from coefficients analysis in regression analysis, age (significant level of 0.000) is positively significant with financial behaviour, and income (significant level of 0.000) is negatively significant with financial behaviour.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The study of financial behaviour among youth in Kota Damansara, Malaysia is still in an early stage with limited research focusing on this topic. Based on the analysis in this study, age and income are statistically significant with financial behaviour among youth in Kota Damansara, Malaysia. Though, the rest of the factors in this study are not significant, it is important for future researcher to find other related variables that can well explain the factors influencing financial behaviour among youth in Malaysia. The importance of conducting more related research in Malaysia is unarguably crucial. This is because the increasing number of youth population in Malaysia and unpredictable economic condition forcing youth to be more careful and responsible in their financial decision. Therefore, there is constant need to ensure that youth in Malaysia are prepared with knowledge and skills to improve their financial behaviour.

5.1 Objective One

The demographic factors in this study consist of age, income, gender, and marital status. After the necessary analysis conducted, it was revealed that only age has statistically significant relationship with financial behaviour. Age has positive relationship with financial behaviour. While income, gender and marital status has

no statistically significant relationship with financial behaviour. This finding shows that youth in Kota Damansara, Malaysia still very naive about financial education and knowledge especially those between the age of 15 to 24 years, causing them to have poor financial behaviour.

To overcome this problem, this study recommends the Ministry of Education (MOE) to work together with Bank Negara Malaysia (BNM) to tackling this problem by targeting youth at very young age. This can be done by introducing financial education program that can be included in the school curriculum in primary and secondary school. Moreover, BNM through savings institutions in Malaysia must come out with more brilliant and attractive ideas to promote savings among youth starting from very early age. Currently there are few savings and education plans in the market such as Skim Simpanan Pendidikan Nasional (SSPN), CIMB Youth Savers Account, RHB Easy-Junior Savings, thus discourage parents to sign up for the plan for their children.

Furthermore, the same effort must be done to tackle the same problem in tertiary education level. A basic financial education subject such as Introduction to Finance should be made available as one of the core subject instead of only an elective subject for selected program in undergraduate level. This is to ensure students regardless of major program able to learn about basic knowledge in finance so that they will be able to use the knowledge in their day to day basis. This is important as a survival skill for them before entering workforce and earn their own income.

As for the working youths, employer can play their role by making sure that financial education and financial management trainings, seminars or counseling are available for their employees. It can be made compulsory or volunteer to the employees. Moreover, semi-government agency under Bank Negara Malaysia (BNM) such as Credit Counseling and Debt Management (AKPK) also provide debt management program for young adults which they can participate through counselling and consultation sessions, workshops, seminars, and talks.

5.2 Objective Two

This study revealed the factors that influence financial behaviours among youth in Kota Damansara, Malaysia is age and income. While, gender, marital status and financial literacy are not significantly related to financial behaviour. Age is positively significant with financial behaviour, meaning that financial behaviour among youth in Kota Damansara, Malaysia very much influenced by their age. The older they are, the better their financial behaviour such as in credit management, savings, personal protection, investment, and personal financial management. This result support the life-cycle theory and finding in previous studies by Legge and Heynes, 2009; Tudela & Young, 2003; 2004; Del-Rio & Young, 2005; Kempson, 2002; Kempson *et. al*, 2004 which mention that older individuals have better financial behaviour compared to younger individuals.

Furthermore, income is negatively significant with financial behaviour. This finding shows that the higher the income the poorer their financial behaviours and

vice versa. Meaning youth with lower income are more modest in their financial decision and practice, compared to youth with higher income.

This result support finding in previous studies by Kempson *et.al*, 2004; Cassells *et.al*, 2015, Del-Rio & Young, 2005 and Ming-Yen Teoh *et.al*, 2013: Selvanathan *et. al*, 2016 which found that people with higher income have poor financial behavior compared to people with lower income by having more debts, spending more on credit cards, and lower savings.

It is recommended that Bank Negara Malaysia (BNM) through investment institutions and savings institutions in Malaysia need to promote more attractive investments and savings plan targeting youth age above 30 years with higher income (especially above RM7500) to invest their surplus money for investment or savings purpose. It is revealed from the analysis that youth aged below 25 years old with and earning higher income have poor financial behaviour. By providing more value-added benefits will encourage more youth with high income stream to put their money for investment, savings and retirement purpose.

5.3 Limitation of the Study

There are few limitation in this study that need to be highlighted. The first one is lack of previous research related to topic of financial behaviour in Malaysia. Although many research had been conducted in similar topic especially in western countries such as Kempson, 2002; Kempson *et.al*, 2004; Tudela & Young, 2003; 2004; Del-Rio & Young, 2005; Dearden *et.al*, 2010 in United Kingdom, Legge &

Heynes, 2009 in New Zealand, Chudzian *et.al*, 2015 in Georgia, Finley & Price, 2014 and Cassels et.al, 2015 in Australia, Fisher, 2010; Lusardi & Mitchell, 2010; Routzhan & Hansen, 2014 in United States, Richa, 2012 in India, etc., there are very few similar research conducted in Malaysia that can be used as a strong reference to support the arguments in this study. Due to limited reference based on study in Malaysia, it is challenging to finding the most related independent variables for this study.

Another limitation is related to sample size, location, limited time and resources. Due to limited time and resources, there is only 400 completed questionnaires collected for data analysis purpose. The study also only focusing in Kota Damansara area also due to time and resource problem.

5.4 Contribution of the Study

The contribution of this study is divided into contribution to academic, industry player, and policy maker.

5.4.1 Contribution to the Body of Knowledge

The finding in this study will add more information and knowledge to the existing and limited literature in financial behaviour topic in Malaysia. It also provides idea to future researchers to discover other factors that are related and can be used to explain and uncover the issue in financial behaviour among youth in the future research.

5.4.2 Contribution to Industry Player

This study provides important finding that can be used by industry players such as Bank Negara Malaysia through its financial institutions, investment institutions, and savings institutions, and Credit Counseling and Debt Management Agency (AKPK) on focusing their effort to tackle the right target group. The findings highlighted that any program to promote and encourage better financial behaviour and knowledge among youth must focus more on younger age especially between age 15 to 24 years because this age group does not practice good financial behaviour. It is also important for industry player especially investment and savings institutions to promote more attractive investment and savings plan for youth with higher income. Meanwhile, Credit Counseling and Debt Management Agency (AKPK) can also focus its educational and counseling program to target on youth in the age range of 15 to 24 years as well as those earning higher income.

5.4.3 Contribution to Policy Makers

The finding in this study provide useful information for ministry of education, ministry of education and other policy maker to draft a basic financial education syllabus to be included in school curriculum in both primary and secondary school. As for the college and university students, it is important for ministry of education to consider a basic financial education subject such as Introduction to Finance to be available as a core subject compulsory to all undergraduate students regardless of their major program. It is a good start to help youth understand the importance of financial education in their life especially after graduating.

Government through Bank Negara Malaysia should also use the power as policy maker in financial industry to developed policies that can help the development of financial knowledge and financial behaviour among youth in Malaysia. While AKPK is focusing more on young adults that experiencing financial problems, it is important for government to set up another agency or department under Bank Negara Malaysia that focus on providing education and training program to help youth aged below 25 years to understand more about financial management, thus encourage and promote good financial behaviour among younger generation in Malaysia.

5.5 Recommendations for Future Study

Due to limitations that exist in the current study, some suggestion is highlighted for future study in this topic. The first suggestion is to find more references based on studies conducted in Malaysia which will provide more support and ideas in term on literature reviews and other factors that influencing financial behaviour in Malaysia.

Moreover, it is suggested that future study should consider larger sample size and wider distribution area of the questionnaires. The data in this study is collected only in Kota Damansara area with 400 sample size. It would be better if the sample size is larger with wider distribution area in future study. Although it will require more effort, time, and resources to do so, but the data will be more informative.

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Appendixes

APPENDIX A: Questionnaire

QUESTIONNAIRE
SOAL SELIDIK

This questionnaire should take about 10 to 15 minutes to complete. Your response is very important to this study and will be kept strictly confidential. Please return the completed questionnaire at your earliest convenience.

This questionnaire consist of 8 pages and 3 section. There are 30 questions in Section I, 10 questions in Section II, and 4 questions in Section III.

Soal selidik ini akan mengambil masa lebih kurang 10 hingga 15 minit. Kerjasama anda amat dihargai untuk kajian kami. Segala maklumat anda adalah sulit dan hanya untuk tujuan kajian. Sila kembalikan soal selidik yang telah dijawab.

Section I : Financial Behaviours

Please circle ONE ANSWER ONLY for each of the following statements or questions.
Sila bulatkan SATU JAWAPAN SAHAJA untuk setiap soalan atau kenyataan berikut.

1. Do you have any type of loans or debts?
   Adakah anda mempunyai sebarang jenis pinjaman atau hutang?

   a) Yes / *Ya*

      Please choose any of the following (*you can choose more than one which is related).
      *Sila pilih daripada yang berikut (*anda boleh memilih lebih daripada satu yang berkaitan.*
      i) Vehicle purchase loan / *pinjaman kenderaan*
      ii) Housing loan / *pinjaman perumahan*
      iii) Personal loan / *pinjaman peribadi*
      iv) Business loan / *pinjaman perniagaan*
      v) Credit card / *kad kredit*
      vi) Others / *lain-lain*

   b) I have no loans or debts.
      Saya tidak mempunyai sebarang pinjaman atau hutang.

2. How much is the proportion of your loans repayment or any debts from your gross monthly income?

Berapakah peratusan pendapatan bulanan anda digunakan untuk membayar pinjaman atau hutang?

a) Less than 10% / *Kurang daripada 10%*
b) Between 10% to 30% / *Antara 10% hingga 30%*
c) More than 30% / *Lebih daripada 30%*
d) None / *Tiada*

3. Do you experience any financial difficulties due to your loans or borrowing?
Adakah anda mengalami sebarang masalah kewangan disebabkan pinjaman yang ditanggung?

a) Yes / *Ya*
b) No / *Tidak*

4. What is the main reason for your financial difficulties?
Apakah penyebab utama kepada masalah kewangan anda?

a) Low income / *Pendapatan tidak mencukupi*
b) Over-commitment / *Komitmen berlebihan*
c) Increased or unexpected expenses / *Perbelanjaan meningkat atau luar jangka*
d) Others (specify) _____ / *Lain-lain*

	Item	1 Strongly disagree (Sangat tidak bersetuju)	2 Disagree (Tidak bersetuju)	3 Neutral (Neutral)	4 Agree (Setuju)	5 Strongly agree (Sangat bersetuju)
5.	Credit card encourages me to buy things I don't really need. *Kad kredit menggalakkan saya membeli barang yang tidak begitu perlu.*					
6.	There should be tighter controls on advertising and promotion of credit. *Pengiklanan dan promosi kemudahan kredit sepatutnya dikawal dengan lebih ketat.*					
7.	Credit facilities makes my financial planning and budgeting easier. *Kemudahan kredit memudahkan perancangan dan bajet kewangan saya.*					

8.	It is inevitable that people will get into debt these days. *Adalah sukar untuk mengelak daripada berhutang pada masa kini.*					
9.	Credit limits on credit cards should only be increased at the customer's request, not automatically. *Limit hutang kad kredit sepatutnya hanya dinaikkan atas permintaan pemegang kad, bukan diberi secara automatik oleh pengeluar kad kredit.*					
10.	If I lose my job, having outstanding credit commitments can make the situation much worse. *Jika saya kehilangan pekerjaan, mempunyai hutang tertunggak akan menyukarkan keadaan.*					
	Item	1 Strongly disagree (Sangat tidak bersetuju)	2 Disagree (Tidak bersetuju)	3 Neutral (Neutral)	4 Agree (Setuju)	5 Strongly agree (Sangat bersetuju)
11.	I am impulsive and tend to buy things even though I can't always afford them. *Saya sering membeli barang secara tidak dirancang dan cenderung untuk membeli barang yang kadang kala diluar kemampuan.*					
12.	I am a saver not a spender. *Saya suka menyimpan dan tidak suka berbelanja*					

13. Do you have any savings?
Adakah anda memiliki sebarang simpanan?

a) Yes
Ya

b) No
Tidak

14. What is the main purpose of your savings?
Apakah tujuan utama anda menyimpan?

a) Reserves for emergency or unexpected event.
Simpanan untuk kecemasan atau keadaan diluar jangkaan.

b) Reserves for personal use or commitment (marriage, education, etc).
Simpanan untuk kegunaan atau komitmen peribadi (berkahwin, pendidikan, dan lain-lain)

c) Savings for investment purpose.
Simpanan untuk kegunaan pelaburan.

d) Others (specify) _____
Lain-lain

	Item	1 Strongly disagree (Sangat tidak bersetuju)	2 Disagree (Tidak bersetuju)	3 (Neutral) (Neutral)	4 Agree (Setuju)	5 Strongly agree (Sangat bersetuju)
15.	I think saving money makes me a better person. *Menyimpan wang menjadikan saya seorang yang lebih baik.*					
16.	Saving gives me a sense of security. *Saya rasa lebih terjamin apabila memiliki simpanan.*					
17.	Saving helps me to be discipline in spending. *Menyimpan membantu saya lebih berdisiplin dalam berbelanja.*					
	Item	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree

		(Sangat tidak bersetuju)	(Tidak bersetuju)	(Neutral)	(Setuju)	(Sangat bersetuju)
18.	I have enough saving for my future planning. *Saya mempunyai simpanan mencukupi untuk perancangan masa hadapan.*					
19.	My income is always not enough for me to spend. *Pendapatan saya seringkali tidak mencukupi untuk menampung perbelanjaan.*					
20.	I will use credit card to pay my expenses when I have insufficient salary to spend. *Saya akan menggunakan kad kredit untuk membayar perbelanjaan apabila pendapatan saya tidak mencukupi.*					
21.	I pay my mortgage and hire purchase installments on time every month. *Saya membayar pinjaman perumahan dan kenderaan tepat pada masanya setiap bulan.*					
22.	I pay off the full credit card outstanding amount every month. *Saya membayar hutang kad kredit sepenuhnya setiap bulan.*					
23.	I always review my monthly spending. *Saya sentiasa memantau perbelanjaan bulanan.*					
24.	In my opinion, it is important to have insurance or takaful protection. *Pada pendapat saya, memiliki perlindungan*					

	insuran atau takaful adalah amat penting.					
25.	I have enough insurance or takaful to ensure that if I were to pass away or become disabled, my family and I would not suffer financially or be financially disabled. *Saya mempunyai perlindungan insuran atau takaful yang mencukupi untuk menampung keperluan kewangan saya dan keluarga sekiranya saya meninggal dunia atau hilang upaya.*					
26.	If I were given an amount of equal six month salary to invest, I would know exactly what to do with it. *Jika saya diberikan sejumlah wang bersamaan dengan enam bulan gaji untuk kegunaan pelaburan, saya pasti apa yang akan saya lakukan dengan wang tersebut.*					
	Item	1 Strongly disagree (Sangat tidak bersetuju)	2 Disagree (Tidak bersetuju)	3 Neutral (Neutral)	4 Agree (Setuju)	5 Strongly agree (Sangat bersetuju)
27.	I understand my risk profile-high risk taker, medium risk taker, or low risk taker. *Saya faham kecenderungan saya dalam mengambil risiko (tinggi, sederhana, rendah)*					
28.	I have monthly financial planning and observed it strictly. *Saya mempunyai perancangan kewangan*					

	bulanan dan memantaunya dengan ketat.					
29.	I gather relevant information and analyze my current financial position before I make a financial decision such as buy a house, car, etc. *Saya mengumpul informasi yang berkenaan dan menganalisis kedudukan kewangan saya sebelum membuat sebarang keputusan berkaitan kewangan seperti membeli rumah, kereta, dan sebagainya.*					
30.	I review my financial plan periodically after the implementation. *Saya menilai rancangan kewangan secara berkala selepas melaksanakannya.*					

Section II : Financial Literacy

Please circle the appropriate answer or fill in the blank where necessary.
Sila bulatkan jawapan yang betul atau isikan tempat kosong.

1. Credit card can be used to obtain cash loan or advance.
Kad kredit boleh digunakan untuk memperoleh pinjaman tunai atau pendahuluan.

a) True *Betul* b) Salah *False* c) Do not know *Tidak tahu*

2. If the chance of getting a disease is 10%, how many people out of 1,000 would be expected to get the disease?
Jika peluang untuk mendapat penyakit adalah 10%, berapa ramaikah yang dijangka akan mendapat penyakit daripada 1,000 orang?

a) 100 b) 10

c) 11 d) Do not know *Tidak tahu*

3. Let's say you have RM200 in a savings account. The account earns 10% dividend (interest) per year. How much would you have in the account at the end of two years? Assuming you did not take out the money and dividend (interest) after first year.
Katakan anda mempunyai RM200 dalam akaun simpanan. Akaun tersebut menawarkan 10% faedah dalam setahun. Berapa banyakkah wang di dalam akaun anda selepas dua tahun? Andaikan bahawa anda tidak pernah mengeluarkan wang dan faedah daripada akaun tersebut dalam tahun pertama.

a) RM220 b) RM240
c) RM242 d) Do not know *Tidak tahu*

4. Suppose you have a friend inherits RM10,000 today and his brother inherits RM10,000 three years from now. Who is the richer because of the inheritance?
Andaikan rakan anda mewarisi harta bernilai RM10,000 hari ini, manakala adiknya mewarisi RM10,000 tiga tahun dari sekarang. Siapa yang lebih kaya disebabkan pewarisan harta tersebut?

a) My friend *Rakan saya* b) His sibling *Adiknya*
c) Do not know *Tidak tahu* d) They're equally rich *Kedua-duanya memiliki kekayaan yang sama*

5. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy _____ today with the money in this account?
Andaikan akaun simpanan anda menawarkan 1% kadar faedah setahun manakala kadar inflasi ialah 2% setahun. Selepas setahun, adakah anda mampu membeli _____ nilai wang yang ada di dalam akaun anda hari ini?

a) More than *Lebih daripada* b) Less than *kurang daripada*
c) Exactly the same as *Sama seperti* d) Do not know *Tidak tahu*

6. Which of the following statements describes the main function of the share market?
Manakah di antara kenyataan berikut yang menerangkan tentang fungsi pasaran saham?

a) The share market helps to predict share earnings.
Pasaran saham membantu meramal pendapatan daripada saham.

b) The share market results in an increase in the price of shares.
Pasaran saham menyebabkan harga saham meningkat.

c) The share market brings people who want to buy shares together with those who want to sell shares.
Pasaran saham menemukan penjual saham dan pembeli saham..

d) Do not know
Tidak tahu

7. When an investor spread his investment among different assets, the risk of losing money is _____
Apabila pelabur melaburkan wangnya dalam aset-aset yang berbeza, risiko untuknya kehilangan wang pelaburan adalah _____

a) Increase
Bertambah

b) Decrease
Berkurang

c) Stay the same
Tidak berubah

d) Do not know
Tidak tahu

8. Buying a company share usually provides a safer return than a share in mutual fund.
Membeli saham syarikat selalunya memberikan pulangan yang lebih stabil berbanding dengan saham unit amanah.

a) True
Betul

b) False
Salah

c) Do not know
Tidak tahu

9. Shares are normally riskier than bonds.
Saham adalah lebih berisiko berbanding bon.

a) True
Betul

b) False
Salah

c) Do not know
Tidak tahu

10. A mutual fund investor has the right to advise the investment manager on the type of shares to be invested.
Pelabur dalam unit amanah berhak untuk menasihati pengurus pelaburan berkenaan jenis saham yang dipilih.

a) True
Betul

b) False
Salah

c) Do not know
Tidak tahu

Section III : Background and Demographic Information of Respondents

Please circle the appropriate answer or fill in the blank where necessary.
Sila bulatkan jawapan yang betul atau isikan tempat kosong.

Age

1	15-19 years
2	20-24 years
3	25-29 years
4	30-34 years
5	35-40 years

Gender

1	Male / *Lelaki*
2	Female / *Perempuan*

Income Per-Month

1	Below RM 2,500 *Dibawah RM2,500*
2	RM 2,500 – RM 5,000
3	RM 5,001 – RM 7,500
4	Above RM7,500 *Melebihi RM7,500*

Marital Status

1	Single / *Bujang*
2	Married / *Berkahwin*
3	Single parent / *Ibu atau bapa tunggal*

Note:
Please specify if you have any comment about this questionnaires;

_____

_____

Terima kasih di atas kerjasama. Sumbangan anda amatlah dihargai
Thank you for your cooperation. Your contribution to this study is greatly appreciated.